



Shanghai Electronic Certificate Authority Center Co., Ltd.
18th Floor
No. 1717 North Sichuan Rd.
Shanghai
China

2015/SH-182/CCYI/MWJ

Report of Independent Accountant on Assessment of the Assertion by the management of Shanghai Electronic Certificate Authority Center Co., Ltd. ("SHECA")

To: Mr. Li Guo
General Manager, Shanghai Electronic Certificate Authority Center Co., Ltd.

We have been engaged to perform a reasonable assurance engagement on the accompanying assertion by the management of Shanghai Electronic Certificate Authority Center Co., Ltd. ("SHECA") for the period 1st May 2014 through 30th April 2015, for its Certification Authority ("CA") operations, SHECA has:

- Disclosed its Business, Key Life Cycle Management, Certificate Life Cycle Management, and CA Environmental Control practices in its Certificate Practice Statement and Certificate Policy
- Maintained effective controls to provide reasonable assurance that:
 - The CA's Certification Practice Statement was consistent with its Certificate Policy; and
 - The CA provided its services in accordance with its Certificate Policy and Certification Practice Statement
- Maintained effective controls to provide reasonable assurance that:
 - Logical and physical access to CA systems and data was restricted to authorized individuals;
 - The continuity of key and certificate management operations was maintained; and
 - CA systems development, maintenance and operations were properly authorized and performed to maintain CA systems integrity
- Maintained effective controls to provide reasonable assurance that the integrity of keys and certificates it managed was established and protected throughout their life cycles;
- Maintained effective controls to provide reasonable assurance that the integrity of subscriber keys and certificates it managed was established and protected throughout their life cycles; and

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- Maintained effective controls to provide reasonable assurance that the integrity of subscriber information was properly authenticated (for the registration activities performed by SHECA).

in accordance with the AICPA/CICA Trust Services Principles and Criteria for Certification Authorities Version 2.0.

Management's Responsibility for the Management's Assertion of SHECA

SHECA's management is responsible for the preparation and presentation of the management's assertion in accordance with the Trust Services Principles and Criteria for Certification Authorities Version 2.0. This responsibility includes designing, implementing and maintaining internal control relevant to the preparation and presentation of the management's assertion of SHECA and applying an appropriate basis of preparation; and making estimates that are reasonable in the circumstances.

Auditor's Responsibility

It is our responsibility, to express a conclusion on the management's assertion of SHECA based on our work performed and to report our conclusion solely to you, as a body, in accordance with our agreed terms of engagement, for management to submit to the related authority to continue displaying the WebTrust Seal¹ on its website, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

SHECA makes use of external registration authorities for specific subscriber registration activities. Our assessment of SHECA management assertion for the purpose of this WebTrust for CA certification examination did not extend to the controls of external registration authorities or the relevant systems and processes under the control of these external registration authorities.

The relative effectiveness and significance of specific controls at SHECA 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 subscribers and relying party locations. We have performed no procedures to evaluate the effectiveness of controls at individual subscribers and relying party locations.

¹ The maintenance and integrity of the SHECA website is the responsibility of the directors; the work carried out by the assurance provider does not involve consideration of these matters and, accordingly, the assurance provider accepts no responsibility for any differences between the accompanying assertion by the management of SHECA on which the assurance report was issued or the assurance report that was issued and the information presented on the website.

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We conducted our work in accordance with the International Standard on Assurance Engagements 3000 “Assurance Engagements Other Than Audits or Reviews of Historical Financial Information”. This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain reasonable assurance over whether the management’s assertion of SHECA comply in all material respects with the Trust Services Principles and Criteria for Certification Authorities Version 2.0.

A reasonable assurance engagement involves performing procedures to obtain sufficient appropriate evidence over whether the management’s assertion of SHECA complies in all material respects with the Trust Services Principles and Criteria for Certification Authorities Version 2.0. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material noncompliance of the management’s assertion of SHECA with the Trust Services Principles and Criteria for Certification Authorities Version 2.0. Within the scope of our work we performed amongst others the following procedures: (1) obtaining an understanding of SHECA’s key and certificate life cycle management business and information privacy practices, and its controls over key and certificate integrity, over the authenticity and privacy of subscriber and relying party information, over the continuity of key and certificate life cycle management operations and over development, maintenance and operation of systems integrity; (2) selectively testing transactions executed in accordance with disclosed key and certificate life cycle management business and information privacy 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 the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Inherent Limitation

We draw attention to the fact that the Trust Services Principles and Criteria for Certification Authorities Version 2.0 include certain inherent limitations that can influence the reliability of the information.

Because of inherent limitations in controls, errors or fraud may occur and not be detected. Furthermore, the projection of any conclusions, based on our findings, to future periods is subject to the risk that (1) changes made to the system or controls, (2) changes in processing requirements, (3) changes required because of the passage of time, or (4) degree of compliance with the policies or procedures may alter the validity of such conclusions.

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Conclusion

In our opinion, the assertion by the management of SHECA for the period 1st May 2014 through 30th April 2015 complies, in all material respects with, the Trust Services Principles and Criteria for Certification Authorities Version 2.0.

Emphasis of Matters

Without modifying our conclusion, we draw attention to below matters:

SHECA's use of the WebTrust for Certification Authorities Seal 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 SHECA's services beyond those covered by the Trust Services Principles and Criteria for Certification Authorities Version 2.0, or the suitability of any of SHECA's services for any customer's intended purpose.

Restriction on Use and Distribution

Our report is intended solely for the use of SHECA to submit the report to the related authority in connection with the Trust Services Principles and Criteria for Certification Authorities Version 2.0 and may not be suitable for another purpose. This report is not intended to be, and should not be distributed to or used, for any other purpose.


PricewaterhouseCoopers Zhong Tian LLP

Shanghai, China
5 June 2015

上海市数字证书认证中心有限公司
中国上海市
四川北路 1717 号 18 楼

2015/SH-182/CCYI/MWJ

上海市数字证书认证中心有限公司**WebTrust**电子认证资格独立鉴证报告
(注意: 本中文报告只作参考。正文请参阅英文报告。)

致: 上海市数字证书认证中心有限公司总经理李国先生

我们接受委托, 对后附的上海市数字证书认证中心有限公司 (Shanghai Electronic Certificate Authority Center Co., Ltd., 简称“SHECA”) 于2014年5月1日至2015年4月30日止期间电子认证服务的管理层认定执行了合理保证的鉴证业务。根据管理层认定, SHECA:

- 在电子认证业务规则及证书策略中披露了其业务、密钥生命周期管理、证书生命周期管理和 CA 控制环境;
- 通过有效控制手段以合理保证:
 - 电子认证业务规则与证书策略中的内容相一致; 及
 - CA 依据其电子认证业务规则和证书策略提供服务。
- 通过有效控制手段以合理保证:
 - 仅有经授权的用户才能通过逻辑和物理访问方式访问 CA 系统及获取数据;
 - 持续有效的维护密钥与电子证书的管理和控制; 及
 - 对 CA 系统的开发、维护、及运作执行适当授权和管理, 以保障其完整性。
- 通过有效的控制机制以合理保证SHECA管理的密钥及电子证书在其生命周期内受到妥善保护;
- 通过有效控制机制以合理保证SHECA管理的用户密钥及电子证书在其生命周期内受到妥善保护;
- 通过有效控制机制以合理保证对用户信息进行恰当鉴定 (针对由SHECA操作的用户注册活动)。

以符合AICPA/CICA Trust Services Principles and Criteria for Certification Authorities Version 2.0 (“WebTrust 电子认证资格标准”)。

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管理层对电子认证服务管理层认定的责任

根据 WebTrust 电子认证资格标准的规定，按照 WebTrust 电子认证资格标准编制和列报电子认证服务的管理层认定是 SHECA 管理层的责任。这种责任包括设计、执行和维护与编制和列报电子认证服务管理层认定有关的内部控制、采用适当的编制基础、以及根据情况做出合理估计。

审计师的责任

根据 WebTrust 电子认证资格标准的规定，我们的职责是在执行鉴证工作的基础上对 SHECA 电子认证服务的管理层认定发表结论，并按照双方同意的业务约定条款，仅对贵公司报告我们的结论，供贵公司根据 WebTrust 电子认证资格标准的要求，为持续获得 WebTrust 电子认证标识（“WebTrust Seal”）向有关机构提交，除此之外并无其他目的。我们不会就本报告的内容向任何其他方承担责任和义务。

SHECA 委托外部用户注册机构（External Registration Authorities）对个别用户进行用户信息鉴定工作。我们对 SHECA 管理层针对本 WebTrust 鉴证所发表的管理层认定所作出的评估并不伸延至这些外部用户注册机构以及它们所管理的系统及流程。

SHECA 的内部控制的有效性和重要性，及其对用户及相关依赖方的控制风险评估所产生的影响，取决于控制间的相互作用以及其他存在于每个用户和相关依赖方的因素。我们并没有对用户和依赖方所负责的控制的有效性进行任何评估工作。

我们根据国际鉴证业务准则第 3000 号“历史财务信息审计或审阅以外的鉴证业务”的规定执行了鉴证工作。该准则要求我们遵守职业道德规范，计划和实施鉴证工作以对 SHECA 电子认证服务的管理层认定是否在所有重大方面符合 WebTrust 电子认证资格标准获取合理保证。

合理保证的鉴证工作涉及实施鉴证程序，以获取有关 SHECA 电子认证服务的管理层认定是否符合 AICPA/CICA WebTrust 电子认证资格标准的充分适当的证据。选择的鉴证程序取决于审计师的判断，包括对 SHECA 电子认证服务的管理层认定存在重大不符合 WebTrust 电子认证资格标准风险的评估。在我们的鉴证工作范围内，我们实施了包括：

（1）了解 SHECA 的密钥和证书生命周期管理、信息保密、以及密钥和证书的管理，用户和依赖方信息的鉴定和保密，密钥和证书生命周期管理的持续性，和系统在开发、变更和运行过程中的完整性；（2）测试业务操作是否遵守了披露的密钥和证书生命周期的

¹ SHECA 网站维护和网站的真实完整是公司董事的职责。我们执行的鉴证程序不包含对该等事项的考虑，因此，对出具本鉴证报告所依赖的 SHECA 管理层认定或鉴证报告与网站所显示信息的任何差异我们均不承担责任。

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管理，以及相关信息保密的业务规则；（3）测试和评估控制活动执行的有效性；（4）其它我们认为必要的评估程序等。

我们相信，我们获取的证据是充分、适当的，为发表鉴证结论提供了基础。

固有限制

我们提请注意，WebTrust电子认证资格标准具有某些能够影响鉴证对象信息可靠性的固有限制。

由于内部控制体系本身的限制，使其无法识别和发现所有可能发生的错误或舞弊。以及由于系统和控制、执行环境、时间、或对规章制度不同的遵循程度的变化，都可能会影响本评估报告在将来时间的参考价值。

结论

我们认为，SHECA 于2014年5月1日至2015年4月30日止期间的电子认证服务的管理层认定在所有重大方面符合WebTrust电子认证资格标准。

强调事项

在不影响我们结论的前提下，我们提请注意：

在SHECA网站上的WebTrust电子认证标识是本报告内容的一种符号表示，它并不是为了也不应被认为是对本报告的更新或任何进一步的保证。

本报告并不包括任何在WebTrust电子认证服务资格标准以外的质量标准声明，或对任何客户对SHECA服务的合适性声明。

使用和分发限制

本报告仅供SHECA管理层根据WebTrust电子认证资格标准的要求而向有关机构提交，不适用于任何其他目的。除了将本报告副本提供给WebTrust以外，本报告非为其他目的编制，也不能为其他目的分发或使用。



普华永道

独立审计报告（续）
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PricewaterhouseCoopers Zhong Tian LLP
普华永道中天会计师事务所（特殊普通合伙）

中国上海
2015年6月5日



PricewaterhouseCoopers Zhong Tian LLP
11th Floor
PricewaterhouseCoopers Center
2 Corporate Avenue
202 Hu Bin Road, Huangpu District
Shanghai 200021, PRC

15 May 2015

Dear Sirs:

Assertion of Management as to the Disclosure of Business Practices and Controls Over the Certification Authority Operations during the period from 1st May 2014 through 30th April 2015

Shanghai Electronic Certificate Authority Center Co., Ltd ("SHECA") operates as a Certification Authority ("CA"). SHECA as a root CA, provides the following certification authority services:

- Subscriber registration
- Certificate renewal
- Certificate rekey
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate validation

Management of SHECA is responsible for establishing and maintaining effective controls over its Certification Authority operations, including CA business practices disclosure, CA 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.

There are inherent limitations in any controls including the possibility of human error and the circumvention or overriding of controls. Accordingly, even effective internal controls can provide only reasonable assurance with respect to SHECA's Certification Authority operations. Furthermore because of changes in conditions, the effectiveness of controls may vary over time.

Management has assessed the controls over its CA operations. The keys and certificates covered in our assessment are listed in the **Appendix** of this letter. Based on that assessment and in management's opinion, SHECA, in providing its Certification Authority services, during the period from 1st May 2014 through 30th April 2015:



- disclosed its Business, Key Life Cycle Management, Certificate Life Cycle Management, and CA Environmental Control practices in its Certificate Practice Statement and Certificate Policy;
- maintained effective controls to provide reasonable assurance that:
 - the CA's Certification Practice Statement was consistent with its Certificate Policy; and
 - the CA provided its services in accordance with its Certificate Policy and Certification Practice Statement.
- maintained effective controls to provide reasonable assurance that:
 - logical and physical access to CA systems and data was restricted to authorised individuals;
 - the continuity of key and certificate management operations was maintained; and
 - CA systems development, maintenance and operations were properly authorised and performed to maintain CA systems integrity.
- maintained effective controls to provide reasonable assurance that the integrity of keys and certificates it managed was established and protected throughout their life cycles;
- maintained effective controls to provide reasonable assurance that the integrity of subscriber keys and certificates it managed was established and protected throughout their life cycles;
- maintained effective controls to provide reasonable assurance that the integrity of subscriber information was properly authenticated (for the registration activities performed by SHECA);

based on the AICPA/CICA Trust Services Principles and Criteria for Certification Authorities Version 2.0 ("the WebTrust for Certification Authorities Criteria") including the following:

CA Business Practices Disclosure

CA Business Practices Disclosure
CA Business Practices 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

Subscriber Key Life Cycle Management Controls
CA-Provided Subscriber Key Generation Services
CA-Provided Subscriber Key Storage and Recovery Services



Integrated Circuit Card Life Cycle Management
Requirements for Subscriber Key Management

Certificate Life Cycle Management Controls

Subscriber Registration
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

Yours faithfully

A handwritten signature in black ink, consisting of two distinct, stylized characters, is positioned above a horizontal line.

Mr. Li Guo
General Manager of Shanghai Electronic Certificate Authority Center Co., Ltd.

Company Chop





Appendix

The list of keys and certificates covered in the management assessment is as follow:

Key Name	Key Type	Key Size (bits)	Certificates (Thumbprint)	Signature Algorithm	Certificate Signed by the Key
UCA Root	Root Key	2048	82 50 be d5 a2 14 43 3a 66 37 7c bc 10 ef 83 f6 69 da 3a 67	SHA-1	UCA Root
SHECA	Signing Key	1024	e7 9b 18 89 ab 57 b8 b1 f4 ac 86 b1 od e1 f4 1a 85 a6 74 03	SHA-1	UCA Root
SHECA G2-1	Signing Key	2048	7e d8 f3 78 57 9a 9c 52 0a 14 df 67 65 97 5e 38 4c 90 do e3	SHA-1	UCA Root
			26 7a bf ef b3 7d a8 27 36 55 3e 5d cb ae 16 e1 23 3b b3 03	SHA-256	
SHECA G3	Signing Key	2048	5a 78 a4 bc b7 71 7f 4f d8 f3 57 b3 a2 cd 55 f5 06 af 2f 5a	SHA-1	UCA Root
			82 19 78 25 6d 28 ae 12 5f 34 do 49 9b 1b 14 2b 6e 46 5b 69	SHA-256	
UCA Global Root	Root Key	4096	0b 97 2c 9e a6 e7 cc 58 d9 3b 20 bf 71 ec 41 2e 72 09 fa bf	SHA-1	UCA Global Root
SHECA	Signing Key	2048	ba 8e c3 b8 21 3b 84 ea 26 b5 3c 6e 26 8c 6c d5 98 ao ab de	SHA-1	UCA Global Root
SHECA Global G2 SSL	Signing Key	2048	eb 3c 8f 0c 1d a2 c3 cb 62 2b e7 e3 14 7b 77 38 9c fb 20 87	SHA-1	UCA Global Root
			4f a5 e6 7b 26 7e 3c 2b 47 d7 61 e8 04 90 ca ad 2c e4 d4 06	SHA-256	
SHECA Global G2 Code Signing	Signing Key	2048	9d b9 09 od dc 2a 71 4c df bb c9 96 9f 2a 89 58 35 86 ec 3d	SHA-1	UCA Global Root
			e3 d9 fa 50 93 ad 33 47 ed 24 7b 29 4d 62 8a 9f 51 90 56 49	SHA-256	
UCA Extended Validation Root	Root Key	4096	b9 c9 f5 8b 3b be f5 75 e2 b5 83 28 77 oe 7b 00 76 c4 ob 5e	SHA-1	UCA Extended Validation Root
			a3 a1 b0 6f 24 61 23 4a e3 36 a5 c2 37 fc a6 ff dd fo d7 3a	SHA-256	
SHECA	Signing	2048	ae 40 a3 74 82 ao 2b	SHA-1	UCA



Key Name	Key Type	Key Size (bits)	Certificates (Thumbprint)	Signature Algorithm	Certificate Signed by the Key
Extended Validation SSL CA	Key		c9 48 78 67 03 93 c5 3e 86 28 6b d0 5f		Extended Validation Root
			76 be 95 77 18 7a bc 51 d6 5d 9c eb 4b 49 16 15 f6 eo ab c1	SHA-256	
SHECA Extended Validation Code Signing CA	Signing Key	2048	ec 24 4e 3e 2f ao d3 61 cb c9 4d 5c f6 ba 26 6b a9 59 b3 d7	SHA-1	UCA Extended Validation Root
			b7 9f e6 76 dc 58 3d 00 e5 8a fc 62 2f d0 c5 a4 77 fb fd 69	SHA-256	



上海市数字证书认证中心有限公司

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<http://www.sheca.com/>

普华永道中天会计师事务所（特殊普通合伙）
中国上海市黄浦区湖滨路202号
企业天地2号楼
普华永道中心11楼

2015年5月15日

致：普华永道中天会计师事务所（特殊普通合伙）：

就2014年5月1日到2015年4月30日期间电子认证服务的管理层认定报告
（本中文报告只作参考。正文请参阅英文报告。）

上海市数字证书认证中心有限公司（简称“SHECA”）是一家提供电子认证（简称“CA”）服务的机构。作为一家根CA机构，SHECA提供以下CA服务：

- 用户注册
- 电子证书更新
- 电子证书密钥更新
- 电子证书颁发
- 电子证书发布
- 电子证书撤销
- 电子证书状态信息处理

SHECA管理层负责建立和维护有效的控制体系来管理CA业务，包括CA规则披露、CA服务完整性（包括密钥和证书生命周期管理控制）、及CA环境控制。这些控制包含监控机制，和对问题的解决方法。

任何控制机制都存在自身的局限性，如人为失误和越权操作。因此，即使是有效的控制也仅能对SHECA的日常运行提供合理的保障。此外，控制的有效性也可能随着环境的变化而变更。

管理层已对CA的控制活动进行了评估。附件列示了评估所包括的密钥和证书。基于评估结果，管理层的意见为，SHECA在2014年5月1日至2015年4月30日提供CA服务期间：

- 在电子认证业务规则及证书策略中披露了其业务、密钥生命周期管理、证书生命周期管理和CA控制环境；
- 通过有效控制手段以合理保证：
 - 电子认证业务规则与证书策略中的内容相一致；及
 - CA依据其电子认证业务规则和证书策略提供服务。



- 通过有效控制手段以合理保证：
 - 仅有经授权的用户才能通过逻辑和物理访问方式访问CA系统及获取数据；
 - 持续有效的维护密钥与电子证书的管理和控制；及
 - 对CA系统的开发、维护、及运作执行适当授权和管理，以保障其完整性。
- 通过有效控制机制以合理保证SHECA管理的密钥及电子证书在其生命周期内受到妥善保护；
- 通过有效控制机制以合理保证SHECA管理的用户密钥及电子证书在其生命周期内受到妥善保护；
- 通过有效控制机制以合理保证对用户信息进行恰当鉴定（针对由SHECA操作的用户注册活动）；

以符合 AICPA/CICA Trust Services Principles and Criteria for Certification Authorities 2.0
（“WebTrust 电子认证资格标准”），包含：

CA业务规则披露

CA业务规则披露

CA业务规则管理

服务完整性

CA密钥生命周期管理

CA密钥生成

CA密钥保管、备份及恢复

CA公钥发布

CA密钥用途

CA密钥归档和销毁

CA密钥泄露

CA加密设备生命周期管理

订户密钥生命周期管理

CA提供的订户密钥生成服务

CA提供的订户密钥保管及恢复服务

IC卡生命周期管理

对订户密钥管理的要求

电子证书生命周期管理

用户注册

电子证书更新

电子证书密钥更新

电子证书颁发

电子证书发布

电子证书撤销

电子证书状态查询



CA 环境控制

安全管理
资产分类与管理
人员安全
物理及环境安全
运营管理
系统访问管理
系统开发与维护管理
业务持续性控制管理
监控与合规管理
审计日志

A handwritten signature in black ink, appearing to be '李国' (Li Guo), written over a horizontal line.

李国
上海市数字证书认证中心有限公司总经理

公司盖章：





附件

下表列示了管理层对CA的控制活动评估所包括的密钥和证书：

密钥名称	密钥种类	密钥长度 (bits)	证书 (Thumbprint)	签名算法	证书签发密钥
UCA Root	Root Key	2048	82 50 be d5 a2 14 43 3a 66 37 7c bc 10 ef 83 f6 69 da 3a 67	SHA-1	UCA Root
SHECA	Signing Key	1024	e7 9b 18 89 ab 57 b8 b1 f4 ac 86 b1 0d e1 f4 1a 85 a6 74 03	SHA-1	UCA Root
SHECA G2-1	Signing Key	2048	7e d8 f3 78 57 9a 9c 52 0a 14 df 67 65 97 5e 38 4c 90 d0 e3	SHA-1	UCA Root
			26 7a bf ef b3 7d a8 27 36 55 3e 5d cb ae 16 e1 23 3b b3 03	SHA-256	
SHECA G3	Signing Key	2048	5a 78 a4 bc b7 71 7f 4f d8 f3 57 b3 a2 cd 55 f5 06 af 2f 5a	SHA-1	UCA Root
			82 19 78 25 6d 28 ae 12 5f 34 d0 49 9b 1b 14 2b 6e 46 5b 69	SHA-256	
UCA Global Root	Root Key	4096	0b 97 2c 9e a6 e7 cc 58 d9 3b 20 bf 71 ec 41 2e 72 09 fa bf	SHA-1	UCA Global Root
SHECA	Signing Key	2048	ba 8e c3 b8 21 3b 84 ea 26 b5 3c 6e 26 8c 6c d5 98 a0 ab de	SHA-1	UCA Global Root
SHECA Global G2 SSL	Signing Key	2048	eb 3c 8f 0c 1d a2 c3 cb 62 2b e7 e3 14 7b 77 38 9c fb 20 87	SHA-1	UCA Global Root
			4f a5 e6 7b 26 7e 3c 2b 47 d7 61 e8 04 90 ca ad 2c e4 d4 06	SHA-256	
SHECA Global G2 Code Signing	Signing Key	2048	9d b9 09 0d dc 2a 71 4c df bb c9 96 9f 2a 89 58 35 86 ec 3d	SHA-1	UCA Global Root
			e3 d9 fa 50 93 ad 33 47 ed 24 7b 29 4d 62 8a 9f 51 90 56 49	SHA-256	
UCA Extended Validation Root	Root Key	4096	b9 c9 f5 8b 3b be f5 75 e2 b5 83 28 77 0e 7b 00 76 c4 0b 5e	SHA-1	UCA Extended Validation Root
			a3 a1 b0 6f 24 61 23 4a e3 36 a5 c2 37 fc a6 ff dd f0 d7 3a	SHA-256	



密钥名称	密钥种类	密钥长度 (bits)	证书 (Thumbprint)	签名算法	证书签发密钥
SHECA Extended Validation SSL CA	Signing Key	2048	ae 40 a3 74 82 a0 2b c9 48 78 67 03 93 c5 3e 86 28 6b d0 5f	SHA-1	UCA Extended Validation Root
			76 be 95 77 18 7a bc 51 d6 5d 9c eb 4b 49 16 15 f6 e0 ab c1	SHA-256	
SHECA Extended Validation Code Signing CA	Signing Key	2048	ec 24 4e 3e 2f a0 d3 61 cb c9 4d 5c f6 ba 26 6b a9 59 b3 d7	SHA-1	UCA Extended Validation Root
			b7 9f e6 76 dc 58 3d 00 e5 8a fc 62 2f d0 c5 a4 77 fb fd 69	SHA-256	