Implementation Rules for Security Certification of Key Network Equipment and Special Products of Network Security

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1. Scope of Application

These Rules is formulated in accordance with the "Cybersecurity Law of P.R.China" and "Regulations of P.R.China on Certification and Accreditation". It specifies the basic principles and requirements on security certification of Key Network Equipment and Special Products of Network Security.

These Rules applies to key network equipment and special products of network security, which should comply with the corresponding scope requirement stated in the Announcement jointly issued by CAC, MIIT, MPS and CNCA of "Key Network Equipment and Special Products of Network Security Catalogs (first batch)" [Joint Announcement No.1,2017] (refer to annex 1).

The standards for security certification are implemented in accordance with the requirements of the relevant competent authority.

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Type Test + Factory Inspection + Follow-up Inspection

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4 Certification Implementation

4.1 Certification Process

The certification client applies for certification to the certification body. After receiving the certification application from the certification client, the certification body examines the application materials, confirms the qualification, and arranges the inspection task to the laboratory selected by the certification client, and informs the certification client to sample and test according to the requirements. The laboratory tests according to relevant standards and / or technical specifications, and submits a test report to the certification body after the test is completed. After the certification body has

passed the examination report, the certification body will organize the factory inspection when necessary. The certification body shall make a certification decision on the type test and the factory inspection result, and issue a certificate to the certification client after the certification decision is passed. The certification body organization regularly supervises the certified products.

4.2 Application for Certification and Its Acceptance

The certification client submits the certification application to the certification body, and submits the relevant materials as required. The certification body conducts the preliminary examination of the data and determines that the certification client submits the information to meet the requirements, and accepts the application.

4.2.1 Division of Certification Unit

Apply for certification according to the product type/version. If the key components of the product are the same, you can apply for certification as a unit. The certification body shall specify the key parts of the product according to the certification requirements.

When applying for certification for the same certification unit with more than one model/version of product, the certification client shall submit a description of the difference between the model/version in the same certification unit and the relevant test report.

4.2.2 Requirements on Application Documents

The certification client shall submit at least the following materials when applying for security certification.

1） Basic Information for Application Certification Application

- Certification Client Statement
- Relevant Legal Status Evidence (copy)
- Relevant Documents Related to the Quality System

2） Technical indicator parameter statement and supporting materials (according to the contents of Annex1 "Scope")

3） Product description

- Chinese product function manual and / or manual
- Applicability of the certification standard
- Main product R&D technical personnel information sheet
- Main product testing technical personnel information sheet
- Main equipment table used for product testing
- Chinese nameplate and warning mark

- Description of differences between type/versions in the same certification unit and related test reports (if applicable)
- Product password test certificate (if applicable)

4） Documents against Security Requirement

- Configuration Management
- Delivery and operation
- Development
- Guiding documents
- Testing

5） Description Document

6） Additional information required by the certification body

4.3 Documentation Review

The materials and documents submitted by the certification client shall be reviewed in accordance with relevant standards and/or technical specifications of the product.

4.4 Type test commission and implementation

4.4.1 Type test sampling

4.4.1.1 Sampling Requirements

The certification body arranges to sample the products to be certified according to the model/version. Samples should be randomly selected from the products produced by the manufacturer (including production lines, warehouses, and markets). Generally, 2 sets of each product are sampled, and the number of samples can be increased if there are special requirements.

The certification client delivers the sample to the laboratory and is responsible for the sample.

The certification client shall provide corresponding instructions and auxiliary equipment according to the requirements of the type test.

4.4.1.2 Disposal of samples and related materials

After the certification is completed, the certification client can apply to the laboratory to retrieve the type test samples, and the relevant application materials are properly disposed of by the certification body and laboratory.

4.4.2 Type test basis

The type test is carried out in accordance with the requirements of the relevant national standards of the corresponding products.

4.4.3 Submission of type test report

After the type test is completed, the laboratory issues a type test report according to the requirements of the certification body and submits it to the certification body.

4.5 Factory Inspection

4.5.1 Contents of the inspection

The contents of the factory inspection are information security assurance capability, quality assurance capability, and product consistency check.

4.5.1.1 Assurance Ability for Information Security

The inspectors sent by the certification body shall perform the audit of the manufacturer and the production enterprise in accordance with Annex 2 (Basic Requirements for Information Security Assurance Ability) (when the national standard for certification covers the requirements of the security assurance capability, it shall be implemented according to the corresponding national standards).

4.5.1.2 Quality Assurance Ability

The certification body shall send inspectors to inspect the production enterprise in accordance with Annex 3 (Basic Requirements for Quality Assurance Capability) and the supplementary inspection requirements established by the certification body.

4.5.1.3 Product Consistency

When the factory is inspected, the consistency of the products to be certified shall be checked at the production site. The following major points shall be checked:

1. The nameplate of the certified product, the product name, model number/version number indicated on the package and displayed at the time of operation are consistent with those indicated on the type test report;
2. The software and hardware used for the certified product shall be consistent with the samples qualified for the type test;
3. Whether the non-certified product is in violation of the certification mark

4.5.2 Timing of factory inspection

The certification body arranges factory inspections according to the certification implementation. The manpower is determined according to the number of units of the certified product, and the size of the manufacturer, the manufacturer, and the security level of the product are appropriately considered. Generally, each place is 2 to 6 man-days.

4.6 Certification result evaluation and approval

The certification body is responsible for comprehensive evaluation of the type test and factory inspection results, and makes a certification decision. If the certification is determined, the certification body issues a certificate to the certification client (each certification unit issues a certificate). If the certification requirements are found to be inconsistent with the certification requirements, the time limit (not more than 3 months) is allowed to be rectified. After the rectification is completed as scheduled, the certification body shall adopt appropriate methods to confirm the rectification results and re-execute the certification decision process.

4.7 Follow-up inspection

4.7.1 Frequency of Supervision

The frequency of supervision is generally once a year. When there are special regulations, the certification body can adjust the frequency of supervision. When necessary, the certification body may conduct supervision without prior notice.

Increase the frequency of supervision if one of the following occurs:

1. When there is a serious quality problem in the certified product, or when the user complains and is verified as the certificate holder's responsibility
2. When the certification body has sufficient reason to challenge the conformity of the certified product with the required standard requirements
3. There is sufficient information to indicate that manufacturers and manufacturing companies may change product structure, production conditions, quality management systems, etc., which may affect product quality.

4.7.2 Supervised Content

After the certification, the supervision is carried out by means of factory inspection, mainly for the inspection of information security assurance capability, certification product consistency and quality assurance capability. If necessary, samples may be taken for laboratory testing. When sampling is required, sampling shall be carried out in accordance with 4.4.1.1. The test items at the time of the initial certification application can be used as the test items at the time of supervision, and the certification body can perform some or all of the items according to the specific conditions. The test of the sample is generally completed within 20 working days by the testing laboratory designated by the certification body.

4.7.3 Evaluation of the results of supervision after certification

After the supervisory review is passed, the certification certificate and the certification mark can be maintained. Corrective actions shall be completed within 3 months of the non-conformities found during the supervisory review. If the certificate is overdue, the certificate will be revoked, the certification mark will be discontinued, and the certificate will be announced.

5 Certification time limit

The time limit for certification refers to the actual working day from the date of the formal acceptance of the application to the issuance of the certificate, usually within 90 working days. The time for rectification is not counted.

6 Certificate

6.1 The Validity of Certificate

The certificate is valid for 5 years. During the validity period, the validity of the certificate is ensured by supervising the certified products every year.

6.2 Change of the Certificate

6.2.1 Change Application

If the product is certified, if it is changed by the manufacturer, manufacturer, certificate holder, etc., the application should be submitted to the certification body.

6.2.2 Evaluation and Approval of Change

The certification body conducts document review based on the content of the changes and the information provided, and arranges type tests and/or factory inspections as needed. After the certification evaluation is passed, the certificate is changed.

6.2.3 Validity of the Certificate

After the certificate is changed, its validity period is the same as the original certificate.

6.3 Extension of certified products

6.3.1 Application for Extension of Certified Products

When the certificate holder needs to increase the scope of certification for the certified product, he/she should submit an extension request to the certification body and submit a description of the difference between the extended product and the original certified product.

6.3.2 Evaluation and Approval for extension of Certified Products

The certification body shall check the consistency of the extended product with the original certified product, confirm the validity of the original certification result for the extended product, and shall supplement the type test and/or factory inspection according to the difference when necessary, and issue separately or reissue a certificate according to the requirements of the certificate holder.

6.3.3 Validity of the Certificate

After the certificate is expanded, its validity period is the same as the original certificate.

6.4 Suspension, Cancellation and Withdrawal of the Certificate

Implementation is carried out referring to the requirements of the "Compulsory Product Certificate Cancellation, Suspension, and Withdrawal Implementation Rules". The certified body shall not continue to use the certificate during the suspension of the certificate and after the certificate is cancelled or withdrawn.

7 Use of Certification Mark

7.1 Certification Mark Style

7.2 Use of Certification Mark

The certification mark can be scaled up or down in proportion to the use. However, deformation or discoloration is not allowed.

7.3 Ways of Usage

Uniformed standard printing marks, molding, nameplate printing, software addition, etc. can be used.

7.4 Position of the Mark

The certification mark should be applied near the nameplate of the product body.

The software product shall be marked with a certification mark on its software package/carrier. If the software product does not use the package/carrier, the product shall be certified by the certification body in a prominent position in the License Agreement used by the software.

Annex 1

Key Network Equipment and Special Products of Network Security

	Catalogue of Equipment/Product	Scope
Key Network Equipment	1. Router	System throughput (bi-direction) >= 12Tbps System routing table capacity >= 550k
	2. Switcher	System throughput (bi-direction) >=30Tbps System Mpps >=10Gpps
	3. Rack-mounted server	Number of CPU >=8 Kernel per CPU >=14 Memory capacity >=256GB
	4. PLC equipment	Controller instruction execution time<=0.08 ms
Special Products of Network Security	5. Data backup all-in-one machine	Backup capacity >=20T Backup speed >=60MB/s Backup time interval <= 1h
	6. Firewall (hardware)	Machine throughput >=80Gbps Maximum Concurrent Connections >=3000k New connections per second >=250k
	7. WEB Application Firewall (WAF)	Overall application throughput >=6Gbps Maximum HTTP concurrent connections >= 2000k
	8. Intrusion Detection System (IDS)	Full inspection rate >= 15Gbps Maximum Concurrent Connections >= 5000k
	9. Intrusion Prevention System (IPS)	Full inspection rate >=20Gbps Maximum Concurrent Connections >= 5000k
	10. Security isolation and information exchange product	Throughput >=1Gbps System delay<=5ms
	11. Anti-spam product	Connection rate >=100/s Average delay <100ms

	12. Network comprehensive audit system	Speed of capture package >=5Gbps Event recording capability >= 50k/s
	13. Network vulnerability scan products	Maximum parallel scan IP number >= 60
	14. Secure database system	TPC-E tpsE >= 4500
	15. Site recovery product (hardware)	Recovery time <= 2ms Site maximum path >= 10

Annex 2

Basic Requirements for Information Security Protection Capabilities

Class of Protection	Protection Components
ADV：Development	ADV_ARC.1 Security Architecture Description
	ADV_FSP.2 Security Executive Function Specification
	ADV_TDS.1 Basic Design
AGD：Guiding Documentation	AGD_OPE.1 Operation User Guide
	AGD_PRE.1 Preparation Procedure
ALC：Lifecycle Support	ALC_CMC.2 Use of the CM System
	ALC_CMS.2 Partial TOE CM Coverage
	ALC_DEL.1 Delivery Procedure

Annex 3

Basic Requirements For Quality Assurance Capabilities

In order to ensure the consistency of the mass-produced certified products and the type test samples, the manufacturer shall meet the basic requirements for quality assurance capabilities specified in this document.

1. Responsibilities and resources

1.1Responsibilities

The manufacturer shall stipulate the duties and mutual relations of various personnel related to the quality activities, and the production enterprise shall appoint a quality person in charge within the organization. Regardless of the duties of the person in other aspects, he or she shall have the following duties and authority:

a） Responsible for establishing a quality system that meets the requirements of this document and ensuring its implementation and maintenance; b）Ensure that products bearing the certification mark meet the requirements of the certification standards; c）Establish documented procedures to ensure the proper storage and use of certification marks; d）Establish a documented procedure to ensure that non-conforming products and certified products are not confirmed by the certification body after the change, without the certification mark

The person in charge of quality should have sufficient ability to do his job.

1.2Resources

The manufacturer shall be equipped with necessary production equipment and testing equipment to meet the requirements of stable production of products meeting the requirements of the standards specified in these Rules; it shall be equipped with corresponding human resources to ensure that personnel engaged in work that has an impact on product quality have the necessary capabilities; maintain the necessary environment for production, testing, storage, etc.

2. Certified product consistency

a） The manufacturer shall control the consistency of the products on the site and the type test samples so that the certified products continue to meet the specified requirements; b）The manufacturer shall establish a product change control procedure, and the change of the certified product shall be reported to the certification body and approved before implementation.

3. Certified product outsourced parts or outsourced software module management

3.1Control of outsourced component suppliers or software modules outsourcer

a） The manufacturer shall establish procedures for the selection, evaluation and routine management of the outsourced component supplier or software module outsourcer to ensure that the components provided by the supplier or the software modules provided by the software outsourcer meet the requirements; b）The manufacturer shall maintain a selection evaluation and daily management record of the supplier or software outsourcer.

3.2Verification of purchased parts or outsourced software modules

a） The manufacturer shall establish and maintain verification procedures and periodic confirmation procedures for the software modules provided by the suppliers or software outsourcers to ensure that the components or software modules meet the requirements specified in the certification; b） The manufacturer should maintain parts or outsourced software modules, or their verification records, confirmation records, and certifications and related data from suppliers or software outsourcers.