

ICS 35.240.01
CCS A16

SF

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SF/T 0033-2019

**Notary data center construction and management
specifications
(English Translation)**

Issued on: January 1, 2019

Implemented on: May 20, 2019

Issued by: Ministry of Justice of the People's Republic of China

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

1 Scope

This standard specifies the overall requirements, overall structure and requirements for notarized data center construction, computer room construction requirements, operation and maintenance systems, and security management.

Management system.

This standard is applicable to the data center construction of judicial administrative notarization management departments, notary associations and various notary institutions.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 2589 General Rules for Comprehensive Energy Consumption Calculation GB/T 2887 General Specification for Computing Station Site GB/T 9361 Site Safety Requirements for Computing Station GB/T 20269 Information Security Technology Information System Security Management Requirements GB/T 20988 Information Security Technology Information System Disaster Recovery Specification GB/T 22239-2008 Information Security Technology Information System Security Level Protection Basic Requirements GB/T 25070 Information Security Technology Information System Level Protection Security Design Technical Requirements GB 50174 Code for Design of Computer Room of Electronic Information System GB 50189 Energy-saving design standard for public buildings GB 50462 Specification for Construction and Acceptance of Computer Room of Electronic Information System GB 51194 Code for Design of Installation Engineering of Communication Power Supply Equipment

3.1 Terms and definitions

The following terms and definitions apply to this document.

3.1.1

Used ratio of computer room the ratio of the total area of the main engine room, support area, and auxiliary area to the total construction area of the machine building.

3.1.2

Network flow model

Based on the two-level division of the basic feature set and the combined feature set, the basic characteristics of the network traffic are extracted from the network traffic in real time data.

Examples. traffic size, packet length information, protocol information, port traffic information, and TCP flag information, etc.

3.2 Abbreviations

The following abbreviations apply to this document.

API Application Programming Interface (Application Programming Interface) CPU Central Processing Unit (Central Processing Unit) DNS domain name system (Domain Name

System) EVB Edge Virtual Bridging KVM virtual machine (Keyboard Video Mouse) IaaS Infrastructure as a Service (Infrastructure as a Service) IDS Intrusion Detection Systems (Intrusion Detection Systems) IP Internet Protocol (Internet Protocol) IPS Intrusion Prevention System (Intrusion Prevention System) PaaS platform as a service (Platform as a Service) PCI Peripheral Component Interconnect Standard (Peripheral Component Interconnect) SaaS Software as a Service (Software as a Service) SAN storage area network (Storage Area Network) TCP Transmission Control Protocol (Transmission Control Protocol) UPS uninterruptible power supply (Uninterruptible Power Supply) VLAN virtual local area network (Virtual Local Area Network) VPN Virtual Private Network (Virtual Private Network)

4.1 Standardization

The selection of equipment should follow the extended support capabilities required by EVB 802.1Qbg to ensure advanced nature.

4.2 Usability

The availability requirements are as follows.

- a) Double backup strategy should be adopted in the overall network design and equipment configuration;
- b) Single point of failure should be eliminated on the network connection, and failover of key equipment should be provided;
- c) The physical links between key equipment should adopt dual redundant connections, and work in accordance with load balancing mode or dual-system hot standby mode;
- d) The key host should use dual-channel network cards, and the full redundancy method should be used to make the system reach 99.999% carrier-class reliability.

4.3 Performance

The transformation of longitudinal flow into a complex multi-dimensional hybrid method should enable the entire system to have a higher throughput and processing capacity.

4.4 Open interface

The open interface requirements are as follows.

- a) Open API interface should be provided;
- b) It should be ensured that resources such as server storage and network can be configured and issued to the device through API interfaces and command line scripts.

4.5 Green energy saving

The overall energy consumption of the network room should follow the relevant regulations of GB 50189 and GB/T 2589. Use low-energy green network equipment.

4.6 Safe and reliable

The security protection level of the notarized data center shall be planned and constructed in accordance with the third-level requirements in GB/T 22239-2008.

5.1 Overall architecture

The overall architecture of the notarization data center is shown in Figure 1.

Figure 1 The overall architecture of the notarization data center

The overall architecture of the notarization data center mainly includes. resource pool, cloud computing service management platform and notarization data center security system. among them.

- a) The resource pool also includes. computer resource pool, storage resource pool and network resource pool;
- b) The cloud computing service management platform manages, dispatches, and monitors the resource pools and applications;
- c) The notarization data center security system guarantees the safe and reliable operation of the notarization data center.

5.2.1 Computer Resource Pool Architecture

The structure of the computer resource pool should be composed of rack-mounted servers and blade servers, and blockchain resources should be increased if conditions are met. Among them.

- a) Blade servers should deploy general business systems and web application systems through server virtualization;
- b) Rack-mounted servers are used in deployment management platforms and high-load database servers, etc.;
- c) Blockchain resources are used to deploy blockchain technology, which should realize the encryption calculation of data.

5.2.2 Configuration and selection

The configuration and selection requirements of the computer resource pool are as follows.