

Translated English of Chinese Standard: GB/T37736-2019

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 35.240.01
L 70

GB/T 37736-2019

Information Technology - Cloud Computing - General Requirements of Cloud Resource Monitoring

信息技术 云计算 云资源监控通用要求

Issued on: August 30, 2019

Implemented on: March 1, 2020

Issued by: State Administration for Market Regulation;

Standardization Administration of the People's Republic of
China.

Table of Contents

Foreword 3

1 Scope 4

2 Normative References 4

3 Terms and Definitions 4

4 Abbreviations 6

5 Overview 7

6 Description Form of Cloud Resource Monitoring Technology Requirements 8

7 Monitoring Technology Requirements for Infrastructure Capabilities Type of
Cloud Resources 8

8 Monitoring Technology Requirements for Platform Capabilities Type of Cloud
Resources 10

9 Monitoring Technology Requirements for Application Capabilities Type of
Cloud Resources 11

10 Monitoring Management Requirements 11

Information Technology - Cloud Computing - General Requirements of Cloud Resource Monitoring

1 Scope

This Standard stipulates the technical requirements and management requirements for cloud resource monitoring.

This Standard is applicable to the establishment of cloud resource monitoring capability by cloud service providers and the evaluation of cloud resource operations by cloud service customers.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 32400-2015 *Information Technology - Cloud Computing - Overview and Vocabulary*

GB/T 35293-2017 *Information Technology - Cloud Computing - General Technical Requirements of Virtual Machine Management*

3 Terms and Definitions

What is defined in GB/T 32400-2015 and GB/T 35293-2017, and the following terms and definitions are applicable to this document. For ease of use, some terms and definitions in GB/T 32400-2015 and GB/T 35293-2017 are repeatedly listed below.

3.1 Cloud Computing

Cloud computing refers to a model of providing and managing scalable and elastic shared physical and virtual resource pools on a demand-based self-service mode through the network.

NOTE: resource includes server, operating system, network, software, application and storage equipment, etc.

[GB/T 32400-2015, Definition 3.2.5]

service customers may configure and utilize computing, storage or network resources.

[GB/T 32400-2015, Definition 3.2.25]

3.9 Tenant

Tenant refers to a group of cloud service users with the same access to a set of physical and virtual resources.

[GB/T 32400-2015, Definition 3.2.37]

3.10 Virtual Machine

Virtual machine refers to a virtual data processing system which is under the exclusive use of a specific user, but its capabilities are implemented by sharing various resources of a real data processing system.

[GB/T 35293-2017, Definition 3.1]

3.11 Virtual Machine Monitor

Virtual machine monitor refers to a layer of software abstraction above the computer hardware layer, which virtually divides computer hardware into one or multiple virtual machines and provides multiple users' access to the physical computer.

[GB/T 35293-2017, Definition 3.2]

3.12 Cloud Resource

Cloud resource refers to the provision of resources required by cloud service, including physical or virtual resources.

3.13 Cloud Computing Management Platform

Cloud computing management platform refers is able to provide an operating environment with cloud service deployment, management and operation capabilities based on demand.

4 Abbreviations

The following abbreviations are applicable to this document.

API: Application Programming Interface

CPU: Central Processing Unit

I/O: Input / Output

Figure 1 -- Framework of Requirements for Cloud Resource Monitoring Technology

In terms of the monitoring management requirements for cloud resources, corresponding requirements are proposed from four aspects, namely: collection management, performance management, alarm management and statistical analysis.

6 Description Form of Cloud Resource Monitoring Technology Requirements

Cloud resource monitoring technology requirements are described in tabular form. The columns of the table include: No., requirements, cloud service customers and cloud service providers. Specifically speaking:

- a) No.: clause No. of monitoring technology requirements, such as: a), b),;
- b) Requirements: the content of monitoring technology requirements, for example, provide CPU working status of resources;
- c) Cloud service customers: this column provides cloud service customer's monitoring technology requirements towards cloud resources, including: "required" (requirements that shall be satisfied), "optional" (requirements that should be satisfied) and "inapplicable" (this requirement is not applicable to the role);
- d) Cloud service provider: this column provides cloud service providers' monitoring technology requirements towards cloud resources, including: "required" (requirements that shall be satisfied), "optional" (requirements that should be satisfied) and "inapplicable" (this requirement is not applicable to the role).

7 Monitoring Technology Requirements for Infrastructure Capabilities Type of Cloud Resources

7.1 Computing Type

Please refer to Table 1 for the monitoring technology requirements for the computing type of cloud resources.

Table 1 -- Monitoring Technology Requirements for Computing Type of Cloud Resources

No.	Requirements	Cloud Service Customers	Cloud Service Providers
-----	--------------	-------------------------	-------------------------

Monitoring management requirements include requirements in four aspects, namely: collection management, performance management, alarm management and statistical analysis, for the acquisition of relevant data of cloud resources.

10.2 Collection Management

Collection management acquires and organizes the performance, alarm and allocation data of cloud resources. Its requirements include

- a) Support and define cloud resource collection model, including:
 - 1) Type of cloud resources;
 - 2) Relevant attributes of indicator data of cloud resources, such as: name of indicator, and unit, etc.
 - 3) Collection mode of indicator data of cloud resources.
- b) Support data acquisition based on the collection model, which should include:
 - 1) Access parameter value configuration management --- manage the parameter value required to access the various specific cloud resources; examine whether the set parameter value meets the requirements for corresponding cloud resources;
 - 2) Data acquisition --- in accordance with the model of cloud resources, acquire relevant indicator data; in accordance with the operation model, examine the legitimacy of the parameters; support the expansion of the operation and maintain backward compatibility;
 - 3) Data subscription --- through the subscription rules, manage data acquisition behaviors; in accordance with the subscription rules, regularly acquire indicator data from cloud resources and send it to subscribers;
- c) Support automatic discovery of cloud resources; automatically complete collection and allocation of cloud resources added or purchased by the cloud computing management platform.
- d) Support automatic management of cloud resource changes; in case of deletion or allocation changes of cloud resources, automatically complete collection and management of the changed resources.
- e) Support the execution of normalized management of the acquired data; in accordance with a uniform data format, process indicators with the same meaning collected from heterogeneous systems.
- f) Support centralized or multi-point collection mechanism; in an individual collection point or distributed collection point, complete the acquisition of

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----