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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 46335.4-2025

IPv6 adoption rate evaluation indicators and evaluation methods - Part 4: Internet data center

IPv6支持度评测指标与评测方法 第4部分：数据中心

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 4 of GB/T 46335 "IPv

6 Support Evaluation Indicators and Methods". The following sections of "Evaluation Metrics and Evaluation Methods" have been published.

2.Mobile Internet Applications (APPs);

---Part 3: IP Backbone Networks;

5.Content Delivery Network (CDN). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This document is under the jurisdiction of the National Telecommunications Standardization Technical Committee (SAC/TC485). This document was drafted by: China Academy of Information and Communications Technology, China United Network Communications Group Co., Ltd., and Beijing Tonghe Shiyi Telecommunications Science. Technology Research Institute Co., Ltd., Beijing Zhongdian Feihua Communication Co., Ltd., Chengdu Wangding Technology Co., Ltd., H3C Technologies Co., Ltd., Beijing Xintai Technology Co., Ltd., Beijing National Financial Technology Certification Center Co., Ltd., Ruizhe Technology Co., Ltd., China Construction Bank Beijing Xingxing Co., Ltd., Maipu Communication Technology Co., Ltd., Beijing Engineering Research Center for Key Technologies and Evaluation of Next-Generation Internet The company, Northeast Agricultural University, and Mudanjiang Normal University. The main drafters of this document are. Ge Pei, Chen Yunke, Gao Jing, He Tao, Tu Libiao, Yuan Yudong, Wang Xuanzhong, Yuan Hongmei, Li Yutao, and Shen Wenbo. Li Hongman, Li Weibao, Luo Ji, Qiao Lianggang, Yu Haisheng, Zhou Changjian, Zhu Jianyu.

According to the "Notice on Accelerating the Large-Scale Deployment and Application of Internet Protocol Version 6 (IPv6)," in order to accelerate the large-scale deployment and application of IPv6... To facilitate deployment, my country has formulated a series of IPv6 application standards. Among them, GB/T 46335, "IPv

6 Support Evaluation Indicators and Methods," is a standard for... This document, formulated to guide the smooth progress of large-scale IPv6 deployment in my country, is proposed to consist of five parts.

1.Website. The purpose is to present the website's domain name resolution system, network connectivity, and website system performance under an IPv6 environment. The support evaluation metrics and methods are applicable to website systems that provide services to the public and support IPv6.

2.Mobile Internet Applications (APPs). The aim is to propose solutions for mobile internet applications (APPs) in terms of IPv6 usability, Evaluation metrics and assessments for IPv6 end-to-end usability, domain name IPv6 support, IPv6 completeness, and IPv6 usage stability. Methodology. Applicable to a comprehensive evaluation of IPv6 support in mobile internet applications.

---Part 3: IP Bearer Networks. The purpose is to propose and standardize the three aspects of IP bearer networks. network readiness, network quality, and network reliability. This section outlines evaluation metrics and methods for IPv6 support, applicable to IP networks carrying Internet application services regarding their IPv6 support. The evaluation.

4.Data Centers. The purpose is to measure the impact of data centers on network traffic, network quality, and infrastructure resources. IPv6 support status, applicable to data center operators for monitoring and evaluating IPv6 support.

5.Content Delivery Network (CDN). The aim is to propose system compatibility guidelines for Content Delivery Networks (CDNs) in an IPv6 environment. Evaluation metrics and methods for IPv6 support, including quantity, resource coverage, general performance, application acceleration performance, and stability. Used for a comprehensive evaluation of the IPv6 support of content delivery network (CDN) operators. IPv

1 Scope

GB/T 46335.4-2025 is the Chinese national standard covering measuring how far a data centre really supports IPv6 - the network, the load balancers and the security appliances, the addressing and the management plane, the customer-facing services, and the scoring that separates a token deployment from a working one. Part 4 of the series, first edition. In force from 1 February 2026. Issued on 5 October 2025, it has been in force since 1 February 2026.

This document specifies the evaluation indicators for IPv6 support in data centers and

describes the corresponding evaluation methods. This document is used for evaluation of data center operators that support IPv6.

2 Normative references

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 datacenter Buildings that provide an operating environment for centrally located electronic information equipment.

Note. A building or several buildings, or a part of a building, including the main computer room, auxiliary area, support area, and administrative area, etc. [Source: GB/T 51314-2018, 2.0.1, with modifications]

3.2 North-south traffic Traffic between clients outside the data center and data center servers, or traffic from data center servers accessing the internet.

4.Abbreviations The following abbreviations apply to this document.

6 Support Evaluation Metrics

5.1 Overview To comprehensively reflect the development status of IPv6 in data centers, this document constructs a framework for data center IPv6 based on a two-tier architecture and three core indicators. Monitoring indicator system.