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GB/T 46332-2025

**IPv6 address assignment and coding rules - Internet access
service providers**

IPv6地址分配和编码规则 互联网接入服务商

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Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.Abbreviations 1 5.IPv6 address access type 2 6.IPv6 address format	2
6.1 Network Device Access Address Format	2
6.2 Business Platform Access Address Format	2
6.3 Access Address Format for Production-Type User Equipment	3
6.4 Access Address Format for Residential User Equipment 3 7 IPv6 address encoding methods	4
6 Address Encoding Methods	4
6 Address Access Type Identifier Encoding Method	4
6 Address Geographic Identifier Encoding Method	4
4 Reference	5

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. 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 Internet Network Information Center, China Telecom Group Corporation, and China Mobile. China Telecom Group Corporation, China United Network Communications Group Co., Ltd., China Broadcasting Network Corporation, Tsinghua University, China The Computer Network Information Center of the Chinese Academy of Sciences, Zhejiang Provincial New Internet Exchange Center Co., Ltd., and Beijing Zhongdian Feihua Communication Co., Ltd. Beijing University of Posts and Telecommunications, Peng Telecom Media Group Co., Ltd., Huawei Technologies Co., Ltd., and Xiaomi Communications Technology Co., Ltd. The main drafters of this document are: Wang Zhifeng, Li Xiang, Su Jia, Wang Lidong, Shen Zhi, Liu Shiyong, Liu Bo, Tu Libiao, Ruan Wenqian, Yang Zhe, and Liu Ying. Li Jingjing, Ma Yan, Wang Haijun, Wang Yanan, Zheng Zhongmin, Wang Zheng, Zhang Shicong, Wang Xuanzhong, Hao Hui, Ma Tongyu, Li

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IPv6 address allocation and encoding rules Internet access service provider

1 Scope

GB/T 46332-2025 is the Chinese national standard covering how an access provider carves up its IPv6 allocation - the prefix lengths given to each customer type, the aggregation that keeps the routing table small, the encoding of region and service into the address, and the records that make an address traceable. First edition, under the Ministry of Industry and Information Technology. In force from 1 February 2026. Issued on 5 October 2025, it has been in force since 1 February 2026.

This document specifies the IPv6 address allocation and encoding rules for Internet access service providers within China. This document applies to Internet access service providers (ISPs) conducting IPv6 address allocation and coding, including basic telecommunications operators and other nationwide ISPs. Internet access service providers, regional internet access service providers, local internet access service providers, and public welfare networks are carrying out IPv6 address allocation. Matching and encoding.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 45282-2025 General Requirements for IPv

3 Terms and Definitions

The terms and definitions defined in GB/T 45282-2025, as well as the following terms and definitions, apply to this document.

3.1 A number of bits in an IPv6 address are used to identify geographical information such as province, city, district, and county.

3.2 A series of consecutive bits in an IPv6 address are used to identify the access type.

3.3 The low-bit portion of an IPv6 address is used to identify a specific interface on a link.

3.4 The high-order bits of an IPv6 address block are used to identify the routing prefix of the IPv6 address.

4. Abbreviations The following abbreviations apply to this document. CC. County Code CI. City Identifier IDC. Internet Data Center

6 Address Allocation and Encoding Rules GB/T 46285-2025 IPv

6 Address Allocation and Encoding Rules for Application Infrastructure Service Providers

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