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

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**IPv4/IPv6 network security protection technical specifications -
Part 1: IP bearer network**

IPv4/IPv6网络安全防护技术规范 第1部分：IP承载网

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

GB/T 45279 "IPv4/IPv6 Network Security Protection Technical Specification" and GB/T 44810 "IPv6 Network Security Equipment Technical Requirements" Together they form a national standard system that supports IPv6 security.

This document is Part 1 of GB/T 45279 "IPv4/IPv6 Network Security Protection Technical Specification". GB/T 45279 has been published. The following parts.

- Part 1: IP bearer network;
- Part 2: Mobile communication network;
- Part 3: Internet Data Center;
- Part 4: Content delivery networks.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

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Introduction

According to the Notice on Accelerating the Large-Scale Deployment and Application of Internet Protocol Version 6 (IPv6), in order to better cope with the complexity of the network, In order to promote the standardization of IPv6 network security work, China has formulated a series of IPv6 security Among them, GB/T 45279 "IPv4/IPv6 Network Security Protection Technical Specification" is to standardize the important network units of telecommunications networks and the Internet.

The security protection work carried out after the deployment of IPv6 is planned to be divided into the following parts.

- Part 1: IP bearer network. The purpose is to promote the security protection of IP bearer network after IPv6 is deployed.
- Part 2: Mobile communication network. The purpose is to promote the security protection of mobile communication networks after the deployment of IPv6.
- Part 3: Internet Data Center. The purpose is to promote the security protection of Internet data centers after the deployment of IPv6.
- Part 4: Content Distribution Network. The purpose is to promote the security protection of content distribution networks after the deployment of IPv6.

IPv4/IPv6 Network Security Protection Technical Specification Part 1: IP bearer network

1 Scope

This document specifies the security protection requirements and test methods for IP bearer networks in IPv4, IPv6, and dual-stack environments, including network security, equipment security, physical environment security, management security, software and business system security, etc.

This document is applicable to guiding the implementation and promotion of security protection work for IP bearer networks that support IPv4/IPv6 protocols.

2 Normative references

GB/T 18018-2019

GB/T 21050-2019

GB/T 22239-2019

GB/T 22240-2020

GB/T 29240-2012

GB/T 39680-2020

GB/T 41267-2022

GB/T 41269-2022

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 IP bearer network

A bearer network built on IP technology (including IPv4 and IPv6 technology) that provides connection services for other business networks. network.

Note. The basic functions of IP bearer network mainly include providing network routing, switching and transmission of packet data for upper layer service network. It is usually not directly connected to the Internet. networking.