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

GB/T 44887.2-2025

**IPv6 evolution technical requirements - Part 2: SRv6-based IP
bearer network**

IPv6 演进技术要求 第2部分：基于IPv6 段路由(SRv6)的IP承载网络

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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 2 of GB/T 44887 "Technical Requirements for IPv

6 Evolution". GB/T 44887 has already published the following parts.

1. Reference Architecture;

---Part 2: IP Bearer Networks Based on IPv

6 Segment Routing (SRv6);

6 Segment Routing Header (SRH);

1 Scope

GB/T 44887.2-2025 is the Chinese national standard covering building a carrier bearer network on SRv6 - the roles of the edge and core nodes, the path computation and the traffic engineering, the slicing and the service isolation, the protection switching, and the interworking with the MPLS network it replaces. Part 2 of the series, with Part 1 on the framework and Part 4 on network programming. First edition, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document defines the overall architecture of SRv6-based IP bearer networks, specifies the device layer technical requirements for SRv6-based systems, and outlines the underlying technologies. SRv6 control layer technical requirements. This document applies

to network construction and equipment development for IP bearer networks that support SRv6.

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 44887.1-2025 IPv

3 Terms and Definitions

The terms and definitions defined in GB/T 44887.1-2025 apply to this document.

4. Abbreviations The following abbreviations apply to this document. ARG. Optional Arguments section Bit. Binary digit IP. Internet Protocol

4 Network Programming Based on IPv

6 Segment Routing (SRv6);

5 Virtual Private Networks (VPNs) Based on IPv

6 Segment Routing (SRv6);

6 Segment Routing (SRv6) Policy;

7 Service Chaining Based on IPv

6 Segment Routing (SRv6);

8 Packet Header Compression Based on IPv

6 Segment Routing (SRv6);

9 Network Fault Protection Based on IPv

6 Segment Routing (SRv6);

10. Enhanced Virtual Private Networks (VPNs) Supporting IP Network Slicing;

6 Flow Detection Technology. 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 United Network Communications Group Co., Ltd., China Mobile Communications Group Co., Ltd., and Huawei Technologies Co., Ltd. Company, China Telecom Group Corporation, China Academy of Information and Communications Technology, China Information and Communications Technology Group Corporation, ZTE Corporation The company, Shanghai Nokia Bell Co., Ltd., H3C Technologies Co., Ltd., Next Generation Internet Key Technologies and Evaluation Beijing Engineering Research Center Co., Ltd., China Mobile (Hangzhou) Information Technology Co., Ltd. This document was drafted by: Pang Ran, Wang Haijun, Cheng Weiqiang, Peng Shuping, Zhu Keyi, Wu Youming, Gao Wei, Liu Yan, Wang Junfang, Liu Jianhua, and Chen Ran. Liu Yao, Gu Fangfang, Wan Xiaolan, Meng Dan, Yu Haisheng, Song Yang, Liu Wenbin, Liang Fang.

According to the "Notice on Accelerating the Large-Scale Deployment and Application of Internet Protocol Version 6 (IPv6)," in order to accelerate the transformation of government applications, To expand industry integration and application, and to promote the standardization of large-scale IPv6 deployment and application innovations, my country has formulated a series of IPv6 standards. In China, GB/T 44887 "Technical Requirements for IPv

6 Evolution" is formulated to standardize the national IPv6 deployment and is proposed to consist of eleven parts.

1.Reference Architecture. The purpose is to define the application scenarios of IPv6 evolution technology in the operator and industry sectors, and in... Deployment in carrier and industry networks.

---Part 2: IP Bearer Networks Based on IPv

6 Segment Routing (SRv6). The purpose is to define IP bearer networks based on SRv6. Overall architecture, SRv6-based device layer technical requirements, and SRv6-based control layer technical requirements.

6 Segment Routing Header (SRH). The purpose is to define the format of the IPv6 segment routing header (SRH), and... SRH's technical requirements for node processing.