ICS 35.220
CCS L 77

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 46448-2025

Information technology - Storage network - Requirement for ethernet-based device discovery

信息技术 存储网络 基于以太网的设备发现要求

Issued on: October 5, 2025 **Implemented on: May 1, 2026**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Table of Contents

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 and is under the jurisdiction of the National Information Technology Standardization Technical Committee (SAC/TC28). This document was drafted by: Huawei Technologies Co., Ltd., China Electronics Technology Standardization Institute, Huazhong University of Science and Technology, and Shenzhen CESI Information Technology Co., Ltd. Technology Co., Ltd., Shenzhen Yuyi Technology Co., Ltd., Inspur Electronic Information Industry Co., Ltd., Northwestern Polytechnical University, China Mobile Communications Xin Group Co., Ltd., Shandong Provincial Computing Center (National Supercomputing Center in Jinan), Hangzhou Hikvision Digital Technology Co., Ltd. China Mobile (Hangzhou) Information Technology Co., Ltd., Jiangsu Zhongtian Technology Co., Ltd., Huiju Storage Technology (Dongguan) Co., Ltd., Chongqing Da Learning, Shenzhen Aerospace Optical Technology Co., Ltd., Zhejiang Dahua Technology Co., Ltd., Shandong Inspur Intelligent Manufacturing Technology Co., Ltd., Zhejiang Bangsheng Technology Co., Ltd., Xiamen University, Beijing

Xingchen Tianhe Technology Co., Ltd., and Beijing Tongyou Feiji Technology Co., Ltd. company. The main drafters of this document are. Meng Fanhui, Sun Wei, Yang Hong, Yang Meng, Yang Juntao, Guo Xiong, Zhang Xiao, Meng Lingzhang, Chen Guoyi, Wang Fang, and Feng Dan. Liu Yang, Feng Yi, Zhao Xiaonan, Zhan Huan, Shi Weiqiang, Sun Jinyang, Li Meixin, Zhang Chun, Jia Jingrun, Li Ming, Mao Bo, Ge Yongxin, Li Gang, Zhang Pengfei Zhou Mingle, Meng Xianwei, Li Ying, Chen Xianzhang, Dong Xuan, Zhang Wancang, Ouyang Jing, Yu Haibo, Xie Shuhong, Yuan Pengfei, Wu Suzhen, Yu Jia, Kong Weisheng Zhang Jinlong and Li Wei. Information technology storage networks based on Ethernet Equipment discovery requirements

1 Scope

GB/T 46448-2025 is the Chinese national standard covering how a host finds storage on an ethernet fabric - the discovery service and its registration, the queries and the notification of change, the authentication of what is discovered, and the behaviour when the discovery controller itself is unavailable. First edition, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document specifies the device discovery mechanism in Ethernet-based storage networks, including network composition, procedures and interface protocols, and messages. content. This document applies to the design, construction, and acceptance of Ethernet-based storage networks.

2 Normative references

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 storage network A standalone network built on top of existing network infrastructure, primarily used for data exchange between computers and storage devices.

3.2 servicedomain A collection of computing and storage resources connected together by physical or logical relationships.

Note. Business connections can only be established between computers and storage devices within the same domain.

3.3 typelengthvalue A highly efficient and scalable protocol message encoding method, namely the type-length-value format, where type represents the class of TLV. The type is. length is the length of the TLV in bytes, and value is the value of the TLV.

3.4 Device discovery The process by which computers within the same business domain automatically acquire and update basic information, status information, and fault

information of storage devices.

4.Abbreviations The following abbreviations apply to this document. ACK acknowledgment message IP (Internet Protocol) MAC Media Access Control