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

GB/T 45346-2025

**Information technology - Technical requirements for graph
database management system**

信息技术 图数据库管理系统技术要求

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1 Scope

This document defines the reference architecture of the graph database management system (hereinafter referred to as the "graph database system") and specifies the storage, computing, interfaces, tools, and operation and maintenance management requirements.

This document is applicable to the design, development, testing, and evaluation of graph database systems.

2 Normative references

GB/T 1988

GB 18030

GB/T 35273-2020

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Graph

A data structure that describes entities and their relationships using vertices and edges.

3.2 graph database

A non-relational database that uses a graph data model to store entities and their relationship information.

Note 1. The data model of a graph database consists of vertices and edges (i.e.,

relationships between vertices).

Note 2. Graph databases support functions such as graph query, graph traversal, and graph analysis, and are suitable for exploring and discovering complex relationships.

[Source. GB/T 37722-2019, 3.1, modified]

3.3 Graph Database Management System

A system for defining, building, manipulating, controlling, managing, and using graph databases.

3.4 graph schema

A framework for defining the types and relationships of vertices, edges, and their properties in a graph database, which provides support for graph data structures, types, and constraints.

Comprehensive description to ensure the consistency and completeness of graph data.

3.5 Graph computing

An abstract representation of the graph structure of data and computational techniques based on this data structure.