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**Blockchain and distributed ledger technology-Application
interface-Technical guidelines of middleware**

区块链和分布式记账技术 应用程序接口 中间件技术指南

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Foreword

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Introduction

The "14th Five-Year Plan" outline has listed blockchain as one of the seven emerging digital

industries, and clearly proposed blockchain technology innovation, application development development and improvement of supervision mechanisms: At present, all walks of life are accelerating the construction and application layout of blockchain infrastructure:

to finance, Internet of Things, intelligent manufacturing, supply chain management, public services and other fields: At the same time, as an emerging technology, blockchain also has its background There are issues such as inconsistent layer technologies, high development and application thresholds, lack of efficient regulatory tools, and data silos:

This document provides guidance for the development of blockchain middleware systems by formulating blockchain middleware technical guidelines and standardizes blockchain technology-based The business application construction process of blockchain technology will help improve the quality of blockchain application services, promote data sharing, and enhance industrial collaboration capabilities, thereby promoting Blockchain technology empowers the real economy and becomes the cornerstone of trust in the digital age:

Blockchain and distributed accounting technology Application Interface Middleware Technical Guide

1 Scope

This document establishes the technical architecture and non-functional elements of blockchain middleware, and provides technical guidelines for blockchain middleware: This document applies to:

- a) Guide the development of blockchain middleware systems;
- b) Standardize the business application construction process based on blockchain middleware technology;
- c) Provide reference for blockchain middleware system evaluation and technology selection:

2 Normative reference documents

GB/T 22239-2019

GB/T 32399-2015

GB/T 33847-2017

GB/T 43572-2023

3 Terms and definitions

The following terms and definitions defined in GB/T 32399-2015, GB/T 33847-2017, GB/T 43572-2023 apply to this document: 3:1 blockchain blockchain A distributed ledger formed by appending consensus-confirmed blocks in sequence using cryptographic links: [Source:

GB/T 43572-2023,3:6] 3:2 middleware Located on top of system software, it is used to support distributed application software and connect different software entities to support software: [Source: GB/T 33847-2017,2:1] 3:3 smart contract smartcontract A computer program stored in a distributed accounting technology system, and any execution results of the program are recorded in the distributed ledger:

[Source: GB/T 43572-2023,3:72] 3:4 functionalcomponent An achievable functional basic building block required to participate in the activity:

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