



APUSIC
固若长城
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Technical Specification

金蝶Apusic分布式消息队列V2.0.6_for_rabbitmq

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1 Preface

This document is a functional specification for Kingdee Apusic Distributed Message Queue for RabbitMQ (Apusic Distributed Message Queue, referred to as: ADMQ for RabbitMQ), providing users with a detailed understanding of the product features and technical specifications of ADMQ for RabbitMQ.

1.1 Target Audience

This document is intended for IT information business leaders, R&D managers, software project managers, software architects, and operations engineers.

1.2 Related Documents

For more information about ADMQ for RabbitMQ, please refer to the following ADMQ for RabbitMQ product documentation set:

No.	Document	Description
1	Kingdee Apusic Distributed Message Queue for RabbitMQ Quick Start Guide	Briefly introduces how to get started with ADMQ for RabbitMQ.
2	Kingdee Apusic Distributed Message Queue for RabbitMQ Installation Guide	Details how to install ADMQ for RabbitMQ on various operating systems, including starting and stopping the ADMQ for RabbitMQ service.
3	Kingdee Apusic Distributed Message Queue for RabbitMQ Message Engine User Guide	Details the usage, configuration, management, and companion tools of the ADMQ for RabbitMQ message engine.
4	Kingdee Apusic Distributed Message Queue for RabbitMQ Console User Guide	Details the usage and operation of the ADMQ for RabbitMQ console.
5	Kingdee Apusic Distributed Message Queue for RabbitMQ Development Guide	Details how to develop ADMQ for RabbitMQ client applications in various languages.
6	Kingdee Apusic Distributed Message Queue for RabbitMQ Migration Guide	Details the migration process from RabbitMQ to ADMQ for RabbitMQ.
7	Kingdee Apusic Distributed Message Queue for RabbitMQ Operations Guide	Details the monitoring, operations, and security hardening of ADMQ for RabbitMQ.

8	Kingdee Apusic Distributed Message Queue for RabbitMQ Performance Tuning Guide	Details performance tuning for ADMQ for RabbitMQ.
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1.3 Technical Support

ADMQ for RabbitMQ provides comprehensive technical support services. You can obtain technical support through the following channels:

- Website: www.apusic.com
- Phone: 400-855-5800
- Email: support@apusic.com
- Kingdee Cloud Community: <https://vip.kingdee.com/?productId=73&productLineId=14&lang=zh-CN>

When requesting technical support, please provide the following information:

1. Your name
2. Company information and contact details
3. Operating system and version
4. Product version number
5. Detailed logs, screenshots, and other information regarding the error or exception

2 Product Version and Compatibility

2.1 Version Information

Attribute	Description
Product Name	Kingdee Apusic Distributed Message Queue
Product Version	ADMQ for RabbitMQ V2.0.6.391
Release Date	March 2026

2.2 Client Compatibility

ADMQ for RabbitMQ V2.0.6.391 is compatible with the following RabbitMQ client versions:

Client Type	Supported Versions	Description
Java	5.x - 5.21.x	Official Java client (amqp-client)
Python	2.x - 2.x	Pika client
Go	1.x - 1.x	amqp091-go client
Node.js	0.x - 0.10.x	amqplib client
.NET	6.x - 6.x	RabbitMQ.Client client
PHP	3.x - 3.x	php-amqplib client

2.3 Protocol Compatibility

Protocol	Status	Description
AMQP 0-9-1	Supported	Core message transport protocol
AMQP 1.0	Supported	Extended protocol support
MQTT	Supported	Lightweight IoT protocol
STOMP	Supported	Simple text protocol
SSL/TLS	Supported	Encrypted transport
SASL/PLAIN	Supported	Plain text authentication

SASL/SCRAM	Supported	SCRAM authentication
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3 Core Feature Specifications

3.1 Message Production and Consumption

Feature	Description	Status
Producer	Supports synchronous/asynchronous sending, batch sending, message persistence	Supported
Consumer	Supports push mode, pull mode, batch consumption	Supported
Message Acknowledgment	Supports manual acknowledgment (Manual Ack) and automatic acknowledgment (Auto Ack)	Supported
Message Persistence	Messages persisted to disk, supports multi-replica	Supported
Message Priority	Supports message priority queues	Supported
Dead Letter Queue	Supports dead letter exchange (DLX) and dead letter queue	Supported
Delayed Queue	Supports delayed messages and delayed queues	Supported

3.2 Exchange

Feature	Description	Status
Direct Exchange	Exact match routing key	Supported
Fanout Exchange	Broadcasts to all bound queues	Supported
Topic Exchange	Pattern match routing key (supports wildcards)	Supported
Headers Exchange	Matches based on message headers	Supported
Exchange Create/Delete	Supports manual creation, auto creation	Supported
Exchange Persistence	Supports persistent exchanges	Supported

3.3 Queue

Feature	Description	Status
Classic Queue	Traditional queue type, supports mirroring	Supported
Quorum Queue	High-availability queue based on Raft consensus algorithm	Supported

Stream Queue	Append-only log type queue, supports high throughput	Supported
Queue Create/Delete	Supports manual creation, auto creation	Supported
Queue Persistence	Supports persistent queues	Supported
Queue Binding	Supports Exchange to Queue binding	Supported
Queue Length Limit	Supports maximum length and maximum byte limits	Supported
TTL	Supports message TTL and queue TTL	Supported

3.4 High Availability and Fault Tolerance

Feature	Description	Status
Multi-Replica	Quorum Queue and Stream Queue support multi-replica	Supported
Raft Consensus	Quorum Queue based on Raft algorithm for consistency	Supported
Leader Election	Supports automatic Leader election	Supported
Failure Recovery	Supports automatic failover	Supported
Mirrored Queue	Classic Queue supports mirroring mode	Supported
Cross-Data Center Deployment	Supports cross-data center multi-active deployment	Supported

3.5 Security Features

Feature	Description	Status
Authentication	Supports SASL/PLAIN/SCRAM authentication	Supported
Authorization Management	Supports Vhost-based ACL access control	Supported
Transport Encryption	Supports SSL/TLS encryption	Supported
Role Control	Supports RBAC role management	Supported
Multi-Tenancy	Supports Vhost resource isolation	Supported

3.6 Operations Management

Feature	Description	Status
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Monitoring Metrics	Supports Prometheus metric export	Supported
Log Management	Supports log level configuration and log rotation	Supported
Configuration Management	Supports dynamic configuration update	Supported
Cluster Management	Supports node addition/removal	Supported
Connection Management	Supports connection limit and heartbeat detection	Supported

4 Technical Specifications

4.1 System Requirements

Component	Minimum Requirement	Recommended Configuration
CPU	4 cores	8 cores or more
Memory	8 GB	16 GB or more
Disk	100 GB SSD	500 GB or more SSD
Network	1 Gbps	10 Gbps
Operating System	Linux (CentOS 7+, Ubuntu 18.04+, Kylin, UOS)	-

4.2 Cluster Scale

Deployment Mode	Number of Nodes	Description
Standalone	1	Development and testing environment
Cluster	3-5	Minimum production environment configuration
Large Scale	10+	High-availability, high-throughput scenario

4.3 Performance Metrics

Metric	Single Node	3-Node Cluster	Description
Throughput	50,000/sec	200,000/sec	Producer send rate
Latency	1ms	1ms	P99 latency
Replica Sync	<1s	<1s	Replica sync delay
Failure Recovery	<30s	<30s	Leader switch time

4.4 Network Ports

Port	Usage	Description
5672	AMQP Protocol	Producer and consumer connection

5671	AMQP over SSL	SSL encrypted connection
15672	Management HTTP	HTTP API and Web management interface
15671	Management HTTPS	HTTPS API and Web management interface
25672	Erlang Distribution	Inter-node cluster communication
12305	Console HTTP	Console Web interface (HTTP)
12306	Console HTTPS	Console Web interface (HTTPS)

4.5 Supported Storage

Type	Support	Description
EXT4	Supported	Linux standard filesystem
XFS	Recommended	High-performance filesystem
NFS	Supported	Network filesystem (requires configuration)
Multi-Disk Mounting	Supported	Supports multiple data directories

5 Deployment Modes

Deployment Mode	Number of Nodes	Description
Standalone Mode	1	Suitable for development and testing environments, no high availability guarantee
Cluster Mode	3-10+	Suitable for production environments, supports high availability and horizontal scaling
Mirrored Queue Mode	3+	Supports Classic Queue mirroring, improving data reliability

6 Backup and Disaster Recovery

6.1 Data Backup

Backup Method	Description
Replica Backup	Data redundancy through Quorum Queue and Stream Queue multi-replica mechanism
Periodic Backup	Supports periodic export of queue data and configuration
Cross-Site Backup	Supports cross-data center synchronization via Shovel and Federation

6.2 Disaster Recovery Capabilities

Disaster Recovery Level	Capability
Node Failure	Automatic failover, ensuring service continuity
Disk Failure	Multi-replica mechanism, single disk failure does not affect service
Data Center Level	Supports cross-data center multi-active deployment
Data Security	Supports periodic snapshot backup

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4008-555-800

Kingdee Apusic Cloud Computing Co., Ltd. (referred to as “Kingdee Apusic”) was founded in 2000. Its predecessor was “Kingdee Middleware Company.” It is a basic software platform provider under Kingdee Group, a national standards-setting enterprise for cloud computing, and a core software enterprise in the national IT application innovation industry. Kingdee Apusic is an enterprise undertaking the National 863 Key R&D Program and the National Major Science and Technology Project for Core Electronic Components, High-end General-purpose Chips and Fundamental Software, and is also a basic platform provider for the national key projects of “Two Networks, One Website, Four Databases, and Twelve Golden Projects.” Its products are widely used in key industries such as government, military, finance, and energy, and it has cumulatively served more than 100,000 customers.



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