

GeminiDB

Bulletin

Issue 01
Date 2023-03-27



Copyright © Huawei Technologies Co., Ltd. 2024. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademarks and Permissions



HUAWEI and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Security Declaration

Vulnerability

Huawei's regulations on product vulnerability management are subject to the *Vul. Response Process*. For details about this process, visit the following web page:

<https://www.huawei.com/en/psirt/vul-response-process>

For vulnerability information, enterprise customers can visit the following web page:

<https://securitybulletin.huawei.com/enterprise/en/security-advisory>

Contents

1 Vulnerability Notice	1
1.1 Vulnerability Fixing Policies.....	1
2 Version Description	2
2.1 Version Information.....	2
2.1.1 GeminiDB Redis API.....	2
2.1.2 GeminiDB Cassandra Version Information.....	3
2.2 Release Notes.....	3
2.2.1 Kernel Versions of GeminiDB Redis API.....	3

1 Vulnerability Notice

1.1 Vulnerability Fixing Policies

Vulnerability Fixing SLA

- High-risk vulnerabilities
GeminiDB fixes vulnerabilities within one month after a community version detects them and releases fixing solutions. The fixing policies are the same as those of the community version.
- Other vulnerabilities
Upgrade versions to fix other vulnerabilities.

Fixing Statement

To prevent customers from being exposed to unexpected risks, GeminiDB does not provide other information about vulnerabilities except vulnerability background, vulnerability details, technical analysis, affected functions/versions/scenarios, solutions, and reference information.

2 Version Description

2.1 Version Information

2.1.1 GeminiDB Redis API

GeminiDB Redis API uses a cloud-native distributed architecture with decoupled storage and compute and is fully compatible with Redis 6.2 and earlier editions, so it provides more enterprise-grade features.

Version Description

Currently, GeminiDB Redis API is compatible with 6.2 and earlier versions, such as 5.0, 4.0, and 2.8. For details, see .

Version Lifecycle Planning of GeminiDB Redis API

 NOTE

- End of Marketing (EOM): indicates that the sale of this version is stopped.
- End of Service & Support (EOS): indicates that the service of this version is stopped. You are advised to use the engine of the latest version when running jobs. After this date, Huawei Cloud will no longer provide any technical support for the software version.

Table 2-1 Lifecycle planning of each GeminiDB Redis API version

Version	Status	Commercial Deployment	Planned EOM Time	Planned EOS Time
5.0	Commercial use	June 2021	N/A	Continuous operations
6.2	Commercial use	March 2024	N/A	Continuous operations

2.1.2 GeminiDB Cassandra Version Information

GeminiDB Cassandra is a cloud-native NoSQL database compatible with Cassandra. It supports Cassandra Query Language (CQL), which gives you SQL-like syntax. GeminiDB Cassandra is secure, reliable, scalable, and easy to manage and provides outstanding read/write performance.

Version Description

Currently, GeminiDB Cassandra is compatible with Cassandra 3.11.

Lifecycle Planning of GeminiDB Cassandra Versions

NOTE

- End of Marketing (EOM): indicates that the sale of this version is stopped.
- End of Service & Support (EOS): indicates that the service of this version is stopped. You are advised to use the engine of the latest version when running jobs. After this date, Huawei Cloud will no longer provide any technical support for the software version.

Table 2-2 GeminiDB Cassandra version lifecycle planning

Version	Status	Adopted by Huawei Cloud	Planned EOM Time	Planned EOS Time
3.11	Commercial use	December 2019	September 2026	September 2027

2.2 Release Notes

2.2.1 Kernel Versions of GeminiDB Redis API

This section describes the kernel version updates of GeminiDB Redis API.

Table 2-3 GeminiDB Redis API versions

Version	Released On	Feature
5.0	2023-06-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> • Supported the RENAMENX command. • Supported the SELECT statement in transactions. • Added the HyerLogLog encoding function, which is fully compatible with open-source Redis and supports data migration. • Supported ROLE commands. • Supported Command HELP commands. • Supported the SCAN command across connections. <p>Resolved issue description:</p> <ul style="list-style-type: none"> • Rectified potential faults in executing the CLIENT command for small instances. • Rectified the error that the return value of the PFADD command is incompatible open-source Redis. • Rectified errors that may occur when the positive and negative infinity is processed with the ZSET command.
	2023-05-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> • Supported bitmap encoding code to improve the performance of the SETBIT and GETBIT commands. • Supported GETEX, GETDEL, LPOS, and LMOVE commands. • Added Get, EXAT, and PXAT options for SET commands. • Optimized the audit log function. <p>Resolved issue description:</p> <ul style="list-style-type: none"> • Resolved problems that may occur during data migration.
	2023-04-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> • Supported both SSL and non-SSL. • Supported SSCAN, HSCAN, and ZSCAN commands across connections. <p>Resolved issue description:</p> <ul style="list-style-type: none"> • Rectified the proxy suspension caused by access through SSL.

Version	Released On	Feature
	2023-02-28	New features and performance optimized: <ul style="list-style-type: none"> ● Added a high-performance memory query engine to accelerate zset read operations. ● Optimized configuration parameters for data migration.
	2023-01-30	Resolved issue description: <ul style="list-style-type: none"> ● Rectified the issue that the RESTORE command for lists may be incorrectly written.
	2022-12-30	New features and performance optimized: <ul style="list-style-type: none"> ● Supported blocking for the XREAD command executed for streams. ● Optimized the compatibility of INFO commands. Resolved issue description: <ul style="list-style-type: none"> ● Rectified the proxy suspension caused by access through SSL.
	2022-11-30	New features and performance optimized: <ul style="list-style-type: none"> ● Optimized performance and stability of small instances. Resolved issue description: <ul style="list-style-type: none"> ● Allowed to migrate data of the bloom filter type.
	2022-10-30	New features and performance optimized: <ul style="list-style-type: none"> ● Added read-only account access for users. ● Supported incremental migration. ● Added password-free whitelist. ● Supported storage encryption. ● Added Bigkeys command to query large keys in the database. ● Added Restore commands to support all types of data structures. ● Optimized the compatibility of Client Kill commands.

Version	Released On	Feature
	2022-09-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> • Supported GEORADUIS_RO and GEORADIUSBYMEMBER_RO commands. • Supported CLIENT ID, CLIENT INFO, CLIENT GETNAME, and CLIENT SETNAME commands. • Added big keys in audit logs. • Reduced CPU usage. • Optimized the compatibility of Dump commands. • Optimized SDK compatibility with Redis clusters and sentinels. <p>Resolved issue description:</p> <ul style="list-style-type: none"> • Resolved issues related to bloom filters that may occur in exceptions. • Resolved issues that may occur when SCAN commands process special characters.
	2022-08-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> • Supported KEYS commands. • Supported Notify Expire. <p>Resolved issue description:</p> <ul style="list-style-type: none"> • Rectified the overflow issue of the timeout parameter of blocking commands.
	2022-07-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> • Supported Bloom filter commands. • Supported the count option for LPOP and RPOP commands.
	2022-06-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> • Supported dump commands. • Supported Key-notify.

Version	Released On	Feature
	2022-05-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> Supported multiple databases and SELECT statements. Allowed users to execute delete commands in read-only mode. Optimized the SDK compatibility with the Redis clusters. Optimized the compatibility of the INFO command. <p>Resolved issue description:</p> <ul style="list-style-type: none"> Resolved the issue that the messages displayed when SCRIPT KILL commands are executed are incompatible with the open-source Redis.
	2022-04-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> Supported unlink commands. Supported block commands for lists. Optimized the prefix matching mode of SCAN commands. <p>Resolved issue description:</p> <ul style="list-style-type: none"> Resolved issues related to transactions.
	2022-03-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> Optimized the performance of the ZSET command. Optimized the Rename performance.
	2022-02-28	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> Supported command Command.
	2022-01-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> Supported RENAME commands. Supported transaction-related commands. Supported CLIENT LIST commands. Added the audit log function. Supported brute force attack defense. Improved the internal fault detection and shortened recovery time objective (RTO). <p>Resolved issue description:</p> <ul style="list-style-type: none"> Resolved the compatibility issue of the DEL and EXISTS commands with the open-source Redis. Rectified returned packet errors that may occur when authentication fails.

Version	Released On	Feature
	2021-12-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> ● Supported commands related to LUA scripts. ● Supported encrypted SSL connection. ● Supported querying for slow query logs. ● Supported INFO CLUSTER commands and Spark access. <p>Resolved issue description:</p> <ul style="list-style-type: none"> ● Resolved integer overflow problems that may occur when EXPIRE and INCR commands are executed. ● Rectified the issue that SCAN commands incorrectly process keys that contain special characters.
	2021-11-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> ● Optimized data compression and decompression efficiency at the computing layer. ● Shortened RTO in internal cluster failover scenarios. <p>Resolved issue description:</p> <ul style="list-style-type: none"> ● Resolved the compatibility issue of GEO and STREAM commands with the open-source Redis. ● Rectified the issue that SCAN commands cannot scan all data.
	2021-10-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> ● Optimized the performance of Flushall. <p>Resolved issue description:</p> <ul style="list-style-type: none"> ● Fixed the elements disorder when LINSERT is used to insert elements.
	2021-09-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> ● Offered SDK compatibility with Redis clusters.
	2021-08-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none"> ● Supported instances with 2 vCPUs. ● Optimized the internal lock range. <p>Resolved issue description:</p> <ul style="list-style-type: none"> ● Rectified the issue that the XREAD command is incompatible with the open-source Redis.

Version	Released On	Feature
	2021-07-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none">• Added TIME commands.• Supported pipelines. <p>Resolved issue description:</p> <ul style="list-style-type: none">• Resolved the issue that the GEOADD command does not verify the longitude and latitude.• Resolved infinite loops that may occur in ZSCAN command execution.
	2021-06-30	<p>New features and performance optimized:</p> <ul style="list-style-type: none">• Supported the read-only mode for instances.• Supported data compression at the computing layer.• Supported check for connection timeout on the client.• Optimized the logic for printing slow query logs. <p>Resolved issue description:</p> <ul style="list-style-type: none">• Rectified the issue that the SDIFF command may be allocated to a wrong partition.