

GeminiDB

Bulletin

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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>

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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 Product Bulletin

2.1 [Notice] GeminiDB Influx and Redis Instances with Cloud Native Storage Will Reach General Availability from February 11, 2025

Announcement

Huawei Cloud will launch GeminiDB Influx instances with cloud native storage in CN East 2 and ME-Riyadh and GeminiDB Redis instances with cloud native storage in AP-Singapore and ME-Riyadh for general availability at 10:00 (GMT+08:00) on February 11, 2025. You will be billed for compute specifications and storage space. For details, see [Billing Overview](#).

Impact

After reaching GA, GeminiDB Influx and Redis instances with cloud native storage will be billed. To avoid unexpected expenditures, you can delete instances that you no longer need.

2.2 [Notice] GeminiDB Influx Cluster Instances (Performance-Enhanced) Will Reach General Availability from January 2, 2025

Announcement

Huawei Cloud will launch GeminiDB Influx cluster instances (performance-enhanced) for general availability (GA) at 10:00 (GMT+08:00) on January 2, 2025. You will be billed for compute specifications and storage space. For details, see [Billing Overview](#).

Impact

After reaching GA, GeminiDB Influx cluster instances (performance-enhanced) will be billed. To avoid unexpected expenditures, you can delete instances that you no longer need.

3 Version Description

3.1 Version Information

3.1.1 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 Redis 6.2 and earlier versions (such as 5.0, 4.0, and 2.8) and is partially compatible with Redis 7.0. Redis 7.0 is in open beta testing (OBT). When you select a compatible version, GeminiDB Redis API 6.2 is provided. For details about supported commands, see [Compatible Commands](#).

Lifecycle Plan of Each GeminiDB Redis API Version

NOTE

- A bulletin will be released before a version reaches EOM/EOS. During this period, you can use [Data Replication Service \(DRS\)](#) to switch the version to a later version before the EOS.
- 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 3-1 Lifecycle plan of each GeminiDB Redis API version

Version	Status	Commercial Deployment	Planned EOM Time	Planned EOS Time
5.0	Commercial use	June 2021	December 2026	December 2027

Version	Status	Commercial Deployment	Planned EOM Time	Planned EOS Time
6.2	Commercial use	March 2024	December 2027	December 2028
7.0	OBT (See Compatible Commands.)	.	.	.

3.1.2 GeminiDB Cassandra API

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

Version Description

Currently, GeminiDB Cassandra API is compatible with Cassandra 3.11.

Versions Lifecycle Planning of GeminiDB Cassandra 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 3-2 Lifecycle planning of each GeminiDB Cassandra API version

Version	Status	Commercial Deployment	Planned EOM Time	Planned EOS Time
3.11	Commercial use	December 2019	September 2026	September 2027
4.0	Commercial use	December 2019	September 2026	September 2027

3.1.3 GeminiDB Mongo API

GeminiDB Mongo API is a cloud-native NoSQL high availability database compatible with MongoDB. This flexible, scalable, and reliable database can be managed on a visualized platform.

Version Description

GeminiDB Mongo API is compatible only with MongoDB Community Edition 4.0.

Lifecycle Planning of Each GeminiDB Mongo API Version

NOTE

- Version 3.4 has been brought offline and no technical support is provided. If you need to upgrade the version, contact Huawei technical support.
- 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 3-3 Lifecycle planning of each GeminiDB Mongo API version

Version	Status	Commercial Deployment	Planned EOM Time	Planned EOS Time
3.4	Unavailable	-	-	-
4.0	Commercial use	June 2020	April 2024	January 2025

3.2 Release Notes

3.2.1 Kernel Version Releases of GeminiDB Redis API

This section describes kernel version updates of GeminiDB Redis API. For details about Redis commands supported by GeminiDB Redis API of different versions, see [Compatible Commands](#).

Table 3-4 GeminiDB Redis API versions

Version	Released On	Feature
6.2	2024-12-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Added a native sharded cluster. • Supported the EXPIRETIME and PEXPIRETIME commands. • Supported the EXPIRE, PEXPIRE, EXPIREAT, and PEXPIREAT commands for the NX, XX, GT, and LT parameters. • Supported the LCS command. • Supported the ZINTERCARD command. • Supported the SSUBSCRIBE, SUNSUBSCRIBE, and SPUBLISH commands. • Improved stability and performance of DRS-based synchronization and supported resumable data transfer after a node is restarted. • Improved the FastLoad performance.
6.2	2024-06-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Supported the SINTERCARD command. • Optimized pipeline performance. • Supported the LMPOP command. • Optimized the cost for establishing a connection.
6.2	2024-05-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Supported database mapping. • Optimized overall performance of memory acceleration. • Supported quick data restoration. • Optimized the support for DDL statements in memory acceleration.

Version	Released On	Feature
6.2	2024-04-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Supported the SCRIPT FLUSH command for the SYNC and ASYNC parameters. • Optimized performance of the Bloom filter. • Supported the BF.CARD command. • Supported the EXISTS command for BITMAP data. • Supported the STRALGO command. • Optimized FastLoad performance. • Optimized performance and stability of a blocking command. • Supported the SCAN command in a specified partition. • Supported memory acceleration. <p>Resolved issue:</p> <ul style="list-style-type: none"> • An error occurred when some commands were renamed.
6.2	2024-02-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Fully compatible with open-source Redis 6.2. • Supported offline data import from RDB files. • Optimized performance of the ZRANGE command. <p>Resolved issue:</p> <ul style="list-style-type: none"> • Performance of determining whether fields in a hash were expired deteriorated.
5.0	2023-12-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Optimized performance and stability of data migration. • Supported the COPY command. • Supported the capability of obtaining LUA scripts. • Supported the MOVE command for exHash data. • Supported IPv6 addresses. <p>Resolved issue:</p> <ul style="list-style-type: none"> • Performance of the KEYSCAN command deteriorated.

Version	Released On	Feature
5.0	2023-11-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Supported hot key statistics. • Supported the high-performance memory query engine for ZSET data. • Supported the high-performance memory query engine for the MOVE command. <p>Resolved issue:</p> <ul style="list-style-type: none"> • The RANDOMKEY command returned a value of nil.
5.0	2023-10-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Supported the high-performance memory query engine for ZSET and SET data. • Optimized performance of some commands for SET data. <p>Resolved issues:</p> <ul style="list-style-type: none"> • An error occurred during concurrent access to LIST data. • An error occurred when the Restore command was executed to restore SET data. • An error occurred when the bigkeys/dbsize sync command was executed for a large number of big keys.
5.0	2023-09-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Optimized performance of the primary/standby edition. • Optimized performance of the LUA script.

Version	Released On	Feature
5.0	2023-08-01	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Optimized compatibility of a blocking command. • Supported a key circuit breaker. • Optimized performance of the memory query engine. • Optimized compatibility of Role, Command, and Touch commands. • Supported the SCAN command across connections. • Supported authentication on database access based on ACL. • Supported the function of disabling all commands. • Supported instance restart by OPS. <p>Resolved issues:</p> <ul style="list-style-type: none"> • An error occurred when a blocking command was executed. • An error occurred when the Select command was executed for a transaction on a single-node instance
5.0	2023-06-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> • Supported the Renamenx command. • Supported the Select command in transactions. • Added the HyerLogLog encoding function, which is fully compatible with open-source Redis and supports data migration. • Supported the Role command. • Supported the Command Help command. • Supported the Scan command across connections. <p>Resolved issues:</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 or negative infinity is processed with the ZSET command.

Version	Released On	Feature
	2023-05-30	<p>Added features and improved performance:</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:</p> <ul style="list-style-type: none"> Resolved problems that may occur during data migration.
	2023-04-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> Supported both SSL and non-SSL. Supported SSCAN, HSCAN, and ZSCAN commands across connections. <p>Resolved issue:</p> <ul style="list-style-type: none"> Rectified the proxy blocking caused by access through SSL.
	2023-02-28	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> Added a high-performance memory query engine to accelerate ZSET data reads. Optimized configuration parameters for data migration.
	2023-01-30	<p>Resolved issue:</p> <ul style="list-style-type: none"> Rectified the issue that the RESTORE command for lists may be incorrectly written.
	2022-12-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> Supported the Xread command executed for streams in a blocking way. Optimized the compatibility of INFO commands. <p>Resolved issue:</p> <ul style="list-style-type: none"> Rectified the proxy blocking caused by access through SSL.
	2022-11-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> Optimized performance and stability of small instances. <p>Resolved issue:</p> <ul style="list-style-type: none"> Allowed to migrate data of the bloom filter type.

Version	Released On	Feature
	2022-10-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Added read-only account access for users. ● Supported incremental migration. ● Added password-free whitelist. ● Supported storage encryption. ● Supported the Bigkeys command to query big keys in a database. ● Added Restore commands to support all types of data structures. ● Optimized the compatibility of Client Kill commands.
	2022-09-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Supported GEORADIUS_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 Cluster and Sentinel. <p>Resolved issues:</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>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Supported KEYS commands. ● Supported Notify Expire. <p>Resolved issue:</p> <ul style="list-style-type: none"> ● Rectified the overflow issue of the timeout parameter of blocking commands.
	2022-07-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Supported Bloom filter commands. ● Supported the count option for LPOP and RPOP commands.
	2022-06-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Supported the Dump command. ● Supported Key-notify.

Version	Released On	Feature
	2022-05-30	<p>Added features and improved performance:</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 Redis Cluster. Optimized the compatibility of the INFO command. <p>Resolved issue:</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>Added features and improved performance:</p> <ul style="list-style-type: none"> Supported the Unlink command. Supported blocking commands for LIST data. Optimized the prefix matching mode of the Scan command. <p>Resolved issue:</p> <ul style="list-style-type: none"> Resolved issues related to transactions.
	2022-03-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> Optimized the performance of the ZSET command. Optimized the Rename performance.
	2022-02-28	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> Supported command Command.
	2022-01-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> Supported the Rename command. Supported transaction-related commands. Supported the Client List command. Added the audit log function. Supported brute force attack defense. Improved the internal fault detection and shortened recovery time objective (RTO). <p>Resolved issues:</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>Added features and improved performance:</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 issues:</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>Added features and improved performance:</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 issues:</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>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Optimized the performance of Flushall. <p>Resolved issue:</p> <ul style="list-style-type: none"> ● Fixed the elements disorder when LINSERT is used to insert elements.
	2021-09-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Offered SDK compatibility with Redis Cluster.
	2021-08-30	<p>Added features and improved performance:</p> <ul style="list-style-type: none"> ● Supported instances with 2 vCPUs. ● Optimized the internal lock range. <p>Resolved issue:</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>Added features and improved performance:</p> <ul style="list-style-type: none">• Supported the Time command.• Supported pipelines. <p>Resolved issues:</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>Added features and improved performance:</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:</p> <ul style="list-style-type: none">• Rectified the issue that the SDIFF command may be allocated to a wrong partition.