GaussDB(for MySQL)

Product Bulletin

Issue   01

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Huawei Technologies Co., Ltd.

Address:	Huawei Industrial Base Bantian, Longgang Shenzhen 518129 People's Republic of China
Website:	https://www.huawei.com
Email:	support@huawei.com

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 Product Bulletin

1.1 Serverless DB Instances Will Be Released Commercially on Jan 19, 2024, 00:00 (GMT+08:00)

Commercial Use Notice

GaussDB(for MySQL) DB instances billed at a serverless basis will be released commercially on Jan 19, 2024, 00:00 GMT+08:00.

The capacities of serverless DB instances automatically change based on application requirements, reducing costs. For billing details, see **Billing**.

To avoid generating any unnecessary expenditures, if you no longer need serverless instances, delete them on the console before Jan 19, 2024 00:00 GMT +08:00.

Regions

CN North-Beijing4, CN East-Shanghai1, CN South-Guangzhou, and AP-Singapore

Impacts

- Existing serverless instances

  Serverless instances can be used free of charge before Jan 19, 2024 00:00 GMT+08:00, but they will be billed normally after Jan 19, 2024 00:00 GMT +08:00.

- New serverless instances

  If you buy a serverless instance after Jan 19, 2024 00:00 GMT+08:00, you will be billed for the instance. For details about how to buy such an instance, see **Buying a Serverless DB Instance**.

1.2 Changing URLs about GaussDB(for MySQL) in Huawei Cloud Help Center

Context

The abbreviation of GaussDB(for MySQL) in URLs is **gaussdbformysql**, so we will change **gaussdb** in the URLs of GaussDB(for MySQL) documents to **gaussdbformysql**.

Time

It is estimated that the new URLs (keyword: **gaussdbformysql**) will be used on September 22, 2023.

Scope

All documents of Huawei Cloud Help Center.

Impacts

The document content remains unchanged, which does not affect the use of your DB instance.

2 Product Release Notes

2.1 Kernel Version Release History

This section describes the kernel version updates of GaussDB(for MySQL).

2.0.45.230900

Table 2-1 Version 2.0.45.230900

Date	Description

Date	Description

2023-11-24	● New features and optimized features:
	  – Added forward compatibility of datatime, timestamp, and time field behaviors.
	  – Added HASH JOIN on disks in PQ.
	  – Added INSERT and REPLACE SELECT functions in PQ.
	  – Added log printing mechanism for connection and disconnection, which helps you locate connection-related issues quickly.
	  – Added some useful information in slow query logs, which helps you locate slow SQL statements.
	  – Allowed you to dynamically enable binlog.
	  – Optimized the NDP bloom filter.
	  – Allowed you to use CAST (...) AS INT) syntax.
	  – Optimized the Nested Loop Join + Distinct performance.
	  – Identified slice ID corresponding to the slow I/O quickly.
	  – Added the sal_init log, which helps you to locate storage timeout issues.
	● Resolved issue description:
	  – There are **trx_id** and **cpu_time fields** in full SQL statements.
	  – Character strings can be converted into INT in WHERE conditions of PREPARE statements.
	  – No crash issue occurs when DDL operations and queries are concurrently accessed.
	  – The binlogs that are sharply generated in a short period of time can be cleared in a timely manner.
	  – Execution results are correct after PQ is enabled for multi-table JOIN SQL statements.
	  – Backward Index Scan is compatible with ICP.
	  – weight_string functions support LEVEL clauses.
	  – The results of the same SQL statement using different indexes are consistent.
	  – When NDP and PQ are enabled at the same time, recycle LSN is correct.

2.0.42.230600

Table 2-2 Version 2.0.42.230600

Date	Description

2023-08-31	● New features and optimized features:
	– Supported for storing full and incremental backups on read replicas, which reduce the memory and CPU usage.
	– Optimized UNDO damage location: When the undo damage occurs during startup, the undo damage log and the corresponding table name are printed.
	– Improved the query performance of read replicas.
	– Added the conversion of IN predicates to subqueries.
	– Large-scale commercial use of the NDP feature.
	– Optimized execution planes using statement outline.
	– Added support for round functions in PQ.
	● Resolved issue description:
	– The ORDER BY LIMIT and ORDER LIMIT result sets do not overlap when fast sorting and priority queue sorting algorithms are used.
	– Returned results are correct for PQ statements.
	– No errors are reported when PREPARE statements are executed.
	– No PQ assertion errors are reported on UNION queries.
	– When a large amount of data is inserted into the primary node, a read replica is promoted to the primary. After the promotion is successful, the results of full-text index queries are correct.
	– When read replicas use the **general_log** and **slow_log** tables, warning logs will not be displayed.
	– After the value of the parameter **innodb_lock_wait_timeout** is changed, the actual timeout wait time is correct.
	– When a read replica is promoted to primary, there is no the error "Failed to find page in slice manager"
	– The percentage for the PWAL scanning progress in the SALSQL log cannot exceed 100%.
	– When the sqlsmith tool is executed, there is no the error "mysqld coredump" in the EXPLAIN phase of query statements.
	– In SELECT DISTINCT CAST functions, datetime can be converted float type.

2.0.39.230300

Table 2-3 Version 2.0.39.230300

Date	Description
2023-05-11	• New features and optimized features: – Supported small-scale instances. – Optimized the solution when DDL statements on standby nodes fail. – Optimized the capacity calculation of salsql. – Supported the restriction on resources of a single SQL statement. – Supported the use of per thread for admin port and local socket. – Optimized the memory of pwalScanner. – Supported the modification of **default_collation_for_utf8mb4** parameter. – Supported diagnosis on large transactions. – Supported the killing of idle transactions. – Accelerated incremental restoration. – Added database and account descriptions. – Supported the acceleration of buffer pool resize. • Resolved issue description: – Ptrc does not lead to inconsistent execution results of Nestedloop join. – No crash issue occurs when subqueries are sorted using Windows functions. – When using rewrites view, tables are not evaluated to turn left joins into inner joins. – Execution results are returned from decimal data that meets specified filter criteria. – Memory is aligned. – Scan_row is correctly recorded in full logs.

2.0.28.18

Table 2-4 Version 2.0.28.18

Date	Description
2023-05-17	Errors of exceeded sorting memory are not reported for columns containing large JSON data.

2.0.28.17

Table 2-5 Version 2.0.28.17

Date	Description
2023-04-02	Character sets are not used in combination in prepare statements.

2.0.28.16

Table 2-6 Version 2.0.28.16

Date	Description
2023-03-14	- New features: Reduced primary/standby latency. - Resolved issues: - No error occurs when JSON-related functions are used in prepare statements. - Query results are returned when filter criteria are specified. - No null pointer error is reported after Windows functions generate a temporary disk table. - The crash issue caused by the use of null pointers in Windows functions is resolved. - Prepare statements are executed successfully.

2.0.28.15

Table 2-7 Version 2.0.28.15

Date	Description
2023-01-11	- New features - Supported SQL statement concurrency control. - Optimized read flow control. - Optimized the consistency of primary/standby execution plan. - Pre-created slices asynchronously. - Resolved issues - No crash issue occurs when the system variable **INNODB_VALIDATE_TABLESPACE_PATHS** is disabled and the **undo space truncate** command is executed. - The query of **information_schema.innodb_trx** is fast. - The issue of inconsistent results is resolved: left joins now are turned into inner joins. - The crash issue caused by subquery optimization is resolved. - Values of the Instant field are correctly obtained under concurrent instantDDL and DML operations. - No OOM issue occurs when two InnoDB tables with FTS indexes are loaded. - No OOM issue occurs when the data dictionary of millions of tables is being updated.

2.0.28.12

Table 2-8 Version 2.0.28.12

Date	Description
2022-12-07	Scan errors triggered by Skip Scans are not displayed when a table with virtual columns is updated.

2.0.28.10

Table 2-9 Version 2.0.28.10

Date	Description
2022-11-16	During a primary/standby switchover, databases will not break down when connecting to the standby instance times out.

2.0.28.9

Table 2-10 Version 2.0.28.9

Date	Description
2022-09-23	- The If(...) statement in **Condition_pushdown::replace_columns_in_cond** is modified. - The database does not break down when: - Storage functions are invoked recursively. - Multiple tables are deleted or full-text search is performed. - SQL query statements of multiple window functions are executed. - Users with global permission can successfully run **SHOW CREATE DATABASE**.

2.0.28.7

Table 2-11 Version 2.0.28.7

Date	Description
2022-08-25	The ptrc crash problem in stored procedure is resolved.

2.0.28.4

Table 2-12 Version 2.0.28.4

Date	Description
2022-07-22	● Databases will not break down due to empty accounts. ● When a temporary table used for aggregation is updated, BLOB points to the latest data.

2.0.28.1

Table 2-13 Version 2.0.28.1

Date	Description
2022-05-16	● New features – You can enable or disable **orphaned definer check control**. – GaussDB(for MySQL) supports transparent transmission of proxy IP addresses. – You can set the consistency level of your proxy instances to session consistency. ● Resolved issues – The data dictionary on standby nodes is updated if DDL statements on the primary node are not submitted. – During a failover, the auto increment of the primary node is not rolled back. – The performance issue of standby nodes is resolved.

2.0.31.220700

Table 2-14 Version 2.0.31.220700

Date	Description
2022-08-12	- New features and performance optimized - Supported SQL statement concurrency control. - Added a limit to concurrent numbers of Faster DDL. - Supported all Faster DDL operations in row format. - Extended full SQL fields. - Optimized flow control. - Supported the quick timeout of **ALTER TABLE**. - Supported the query of plan cache. - Optimized statistics on standby nodes. - Resolved issues - Standby nodes do not break down after partition-table on the primary node is renamed. - The default buffer size of SQL tracer is modified. - When the truncate lsn of standby nodes lags behind, the standby nodes can start successfully. - The execution plan error is not displayed when SQL queries with the same range are executed. - The crash issue caused by empty accounts is resolved. - The crash issue caused by database dropping is resolved.

2.2 Version Release Policy

GaussDB(for MySQL) is a MySQL-compatible, enterprise-grade database service. Data functions virtualization (DFV) is used to decouple storage from compute and can auto scale up to 128 TB per instance. A failover can be performed within seconds. It provides the superior performance of a commercial database at the price of an open-source database.

This section describes the lifecycle and upgrade policy of GaussDB(for MySQL).

Version Lifecycle

Table 2-15 Lifecycle of each GaussDB(for MySQL) version

GaussDB(for MySQL) Version Number	Status	Open-Source Compatibility	Released in Community	Adopted by Huawei Cloud	EOM	EOS
2.0.42	Commercial use	8.0.22	October 2020	September 2023	November 2023	September 2026
2.0.39	Commercial use	8.0.22	October 2020	June 2023	September 2023	June 2026
2.0.31	Commercial use	8.0.22	October 2020	September 2022	June 2023	September 2025
2.0.29	Commercial use	8.0.22	October 2020	July 2022	September 2022	July 2025
2.0.28	Commercial use	8.0.22	October 2020	June 2022	June 2023	June 2025
2.0.26	Commercial use	8.0.22	October 2020	April 2022	June 2022	April 2025
2.0.17	Commercial use	8.0.22	October 2020	February 2022	April 2022	February 2025
2.0.15	Commercial use	8.0.22	October 2020	November 2021	February 2022	November 2024
2.0.13	Commercial use	8.0.18	October 2019	September 2021	November 2021	September 2024
2.0.12	Commercial use	8.0.18	October 2019	June 2021	September 2021	June 2024
2.0.11	Commercial use	8.0.18	October 2019	December 2020	June 2021	December 2023
2.0.8	Commercial use	8.0.18	October 2019	September 2020	December 2020	September 2023

- Adopted by Huawei Cloud: The commercial version of GaussDB(for MySQL) has been fully verified and is stable and reliable. You can use this version in production environments while enjoying the service-level agreement (SLA) provided by GaussDB(for MySQL).

- End of Marketing (EOM): After the EOM of a GaussDB(for MySQL) version, the instances of the version cannot be created and sold.

- End of Service (EOS): After the EOS of a GaussDB(for MySQL) version, the DB instances of this version cannot be created and there is no technical support provided for the existing DB instances, including new feature updates, vulnerability or bug fixing, patch upgrades, service ticket guidance, and online check. GaussDB(for MySQL) does not provide an SLA for this version.

DB Instance Versions

- DB instance major version: The format is $x.y$ (The current version 2.0 corresponds to MySQL 8.0 in the community.)

- Patch version: The format is $x.y.z.yymm(n)$, where $x.y$ indicates the DB instance major version, z indicates the DB instance minor version, $yymm$ indicates the year and month when the version is released, and (n) indicates the patch version.

Figure 2-1 Instance versions
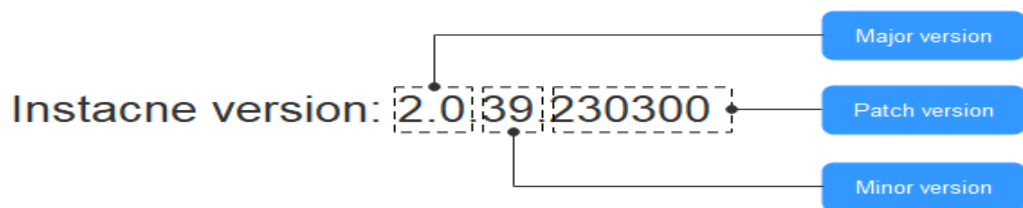
Upgrade Policy

To enjoy stable, reliable and secure GaussDB(for MySQL), you are advised to periodically upgrade your DB instance before EOS.

For details, see **Upgrading a Minor Version**.