

What Is New in GreatSQL 8.0.32-24



Features Added **01**

Features Improved **02**

Bugs Fixed **03**

Others **04**



01 Features Added

Features Added



- SQL Compatibility
- MGR with RW-VIP
- MGR applier queue
- MGR Xcom cache
- Parallel load data
- Encryption enhance

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- 数据类型扩展：CLOB、VARCHAR2
- DATETIME运算、ROWNUM、子查询无别名、EXPLAIN PLAN FOR等语法
- ADD_MONTHS()、CAST()、DECODE()等函数

- Under Single-Primary mode
- RW node with VIP
- VIP Drift when Primary node switch

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- applier queue was originally writing each event individually
- optimized to batch writes
- batch size is not less than 10000
- default value: 100000 (generally recommended)

- In 5.7, size max to 1G, cannot be dynamically changed
- Can be dynamically changed from 8.0
- The dynamic allocation can cause response latency
- Static allocation in GreatSQL to avoid response latency

- The native LOAD DATA in MySQL works in single-threaded, fetching data line by line
- This approach leads to poor performance
- If the binlog transaction exceeds 2GB during the import of large files, it can potentially cause MGR interruption
- GreatSQL will split large files into multiple smaller files and parallel import using multiple threads
- About 20 times faster than before

- CLONE encryption
- mysqldump encryption
- InnoDB tablespace encryption

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02 Features Improved

- 提升了Secondary节点上大事务并发应用回放的速度
- 优化了加入节点时可能导致性能剧烈抖动的问题
- 完善MGR中的外键约束机制，降低或避免从节点报错退出MGR的风险



03 Bugs Fixed



- 修复InnoDB PQ可能导致查询hang住，甚至crash的问题
- 修复recovering节点被中途停止导致的数据异常问题
- 修复多主多写模式中，个别情况下可能丢数据的问题
- 修复在某些特殊场景下，多个节点同时启动一直处于recovering的状态
- 修复rejoin过程中，member_stats相关查询导致崩溃的问题
- 修复stop group_replication时可能长时间等待的问题
- 修复主从环境下的binlog导入MGR可能引起死循环问题



04 Others

1	特性	GreatSQL 8.0.32-24	MySQL 8.0.32
2	开源	✓	✓
3	ACID完整性	✓	✓
4	MVCC特性	✓	✓
5	支持行锁	✓	✓
6	Crash自动修复	✓	✓
7	表分区(Partitioning)	✓	✓
8	视图(Views)	✓	✓
9	子查询(Subqueries)	✓	✓
10	触发器(Triggers)	✓	✓
11	存储过程(Stored Procedures)	✓	✓
12	外键(Foreign Keys)	✓	✓
13	窗口函数(Window Functions)	✓	✓
14	通用表表达式CTE	✓	✓
15	地理信息(GIS)	✓	✓

1	特性	GreatSQL 8.0.32-24	MySQL 8.0.32
16	基于GTID的复制	✓	✓
17	组复制(MGR)	✓	✓
18	MyRocks引擎	✓	✗
19	SQL兼容扩展	1.数据类型扩展 2.SQL语法扩展 共超过20个扩展新特性	✗
20	MGR提升	1.地理标签 2.仲裁节点 3.读写节点绑定VIP 4.快速单主模式 5.智能选主机制 6.全新流控算法	✗
21	性能提升	1.InnoDB并行查询 2.并行load data	✗
22	安全提升	1.国密支持 2.备份加密 3.审计日志入库	✗

- GreatSQL是**适用于金融级应用的国内自主开源数据库**，具备**高性能、高可靠、高易用性、高安全**等多个核心特性，可以作为MySQL或Percona Server的可选替换，用于线上生产环境，且完全免费并兼容MySQL或Percona Server
- GreatSQL开源数据库由万里数据库创建并主导
- 源码、文档、下载等资源
 - 官网：<https://greatsql.cn>
 - 源码：<https://gitee.com/GreatSQL/GreatSQL>
 - 文档：<https://gitee.com/GreatSQL/GreatSQL-Doc>
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