鼎甲迪备

GreatDB for 迪备 Catalog 安装配置指南

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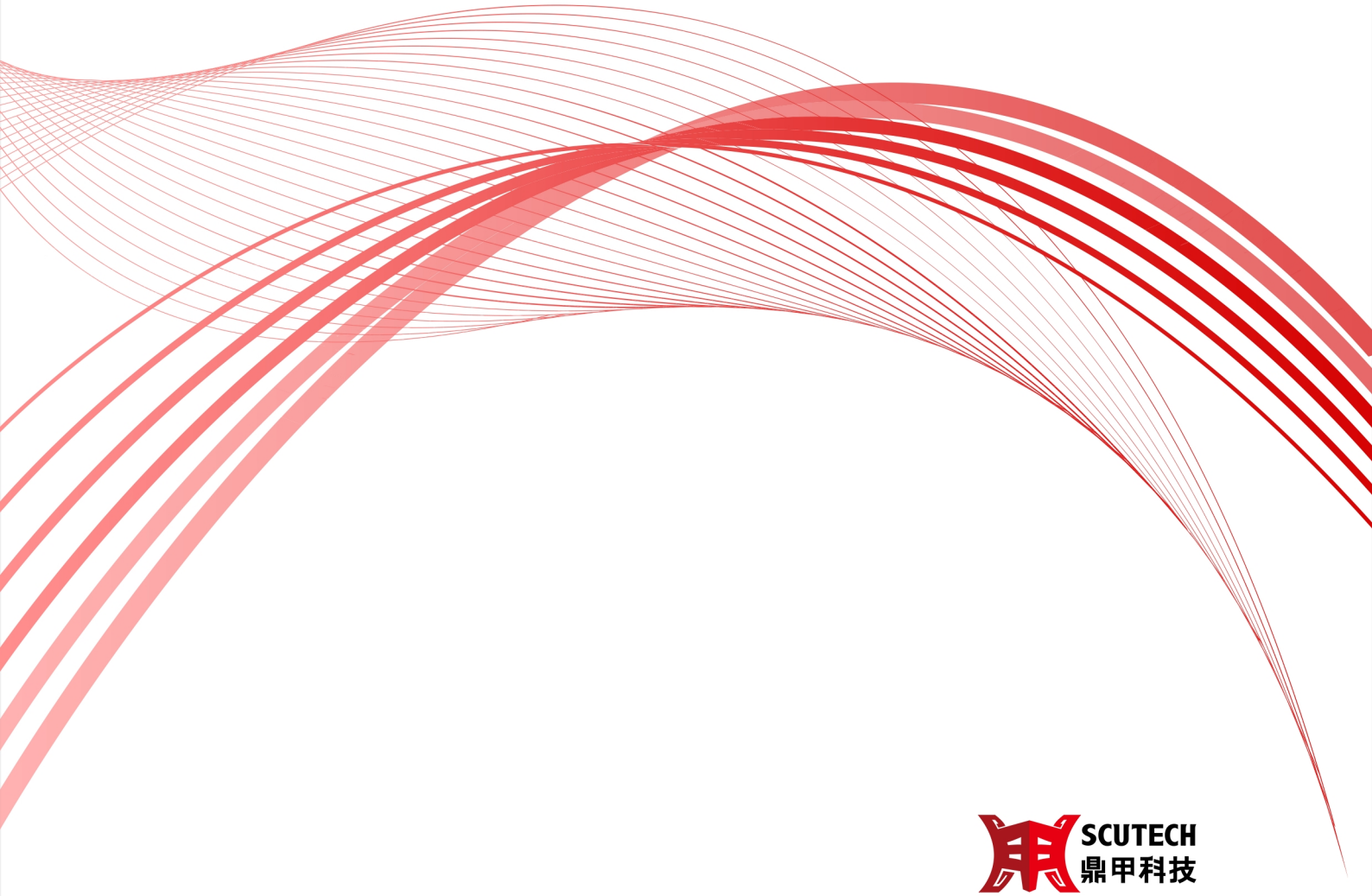

SCUTECH 鼎甲科技

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1 简介

本文档主要描述了如何安装 GreatDB 数据库，以及如何将其配置为迪备 Catalog 指引。后面章节主要分为两部分：一、安装 GreatDB 数据库二、配置 GreatDB 为迪备 Catalog。

2 软件环境

- 操作系统：Kylin-Server-V10-SP3-General-Release-2303-ARM64.iso
- 数据库：GreatDB-1.0.0.6108032-GA-1-a3ac0d6c-Linux-glibc2.28-aarch64-minimal.tar.xz

备注： 实际的操作系统、数据库版本以正式发布的为准。

3.1 系统配置

1. 关闭防火墙

```
systemctl status firewalld
systemctl stop firewalld
systemctl disable firewalld
```

2. 关闭 selinux

```
getenforce
setenforce 0
sed -i '/^SELINUX=/c'SELINUX=disabled /etc/selinux/config
```

3. 修改 /etc/security/limits.conf，在文件末尾增加如下配置

```
greatdb        soft        core        unlimited
greatdb        hard        core        unlimited
greatdb        soft        nofile        1024000
greatdb        hard        nofile        1024000
greatdb        soft        nproc         1024000
greatdb        hard        nproc         1024000
```

3.2 安装 GreatDB 数据库

1. 创建用户

```
groupadd greatdb
useradd -g greatdb greatdb
passwd greatdb
```

2. 创建目录

```
mkdir -p /opt/greatdb/conf /infokist/greatdb/dbdata/data3306/{data,log,tmp} /infokist/
↪greatdb/logs /opt/greatdb/svr
```

3. 上传安装包解压

```
cd /opt/greatdb/svr
tar -xvf GreatDB-1.0.0.6108032-GA-1-a3ac0d6c-Linux-glibc2.28-aarch64-minimal.tar.xz -C /
↪opt/greatdb/svr
mv GreatDB-1.0.0.6108032-GA-1-a3ac0d6c-Linux-glibc2.28-aarch64-minimal greatdb
```

4. 修改目录权限

```
chown -R greatdb:greatdb /opt/greatdb
chown -R greatdb:greatdb /infokist/greatdb
```

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```
chown -R greatdb:greatdb /infokist/greatdb/dbdata
chown -R greatdb:greatdb /infokist/greatdb/dbdata/data3306
```

5. 添加 GreatDB 服务，在 systemd 中的服务名字为 greatdb-3306

```
cat >/usr/lib/systemd/system/greatdb-3306.service<<EOF
[Unit]
Description=greatdb-3306 Server
After=network.target

[Install]
WantedBy=multi-user.target

[Service]
User=greatdb
Group=greatdb

Type=simple
ExecStart=/opt/greatdb/svr/greatdb/bin/greatdbd --defaults-file=/opt/greatdb/conf/
↪greatdb3306.cnf
Restart=on-failure
LimitNOFILE=1024000
LimitNPROC=1024000
TimeoutStopSec=15
PrivateTmp=false
EOF

systemctl daemon-reload
```

6. 对 GreatDB 用户进行 visudo 授权

```
cat >/etc/sudoers.d/greatdb<<EOF
greatdb ALL=(ALL) NOPASSWD: /usr/bin/systemctl start greatdb-3306, /usr/bin/systemctl stop
↪greatdb-3306, /usr/bin/systemctl status greatdb-3306
EOF
```

7. 修改数据库配置文件，在/opt/greatdb/conf/greatdb3306.cnf 文件中增加下列配置

```
[mysqld]

user=greatdb
port=3306
server_id=3306165
admin_address='127.0.0.1'
admin_port=33062
create_admin_listener_thread=ON
mysqlx_port=33060

character_set_server=utf8mb4
collation_server=utf8mb4_0900_ai_ci
lower_case_table_names=1
local_infile=ON
secure_file_priv=''
skip_name_resolve=ON
default_time_zone='+8:00'
```

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```
default_authentication_plugin=mysql_native_password
auto_increment_increment=1
auto_increment_offset=1
explicit_defaults_for_timestamp=ON
sql_mode=STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_
↪ENGINE_SUBSTITUTION

basedir=/opt/greatdb/svr/greatdb
datadir=/infokist/greatdb/dbdata/data3306/data
tmpdir=/infokist/greatdb/dbdata/data3306/tmp
pid_file=/infokist/greatdb/dbdata/data3306/data/greatdb.pid
socket=/infokist/greatdb/dbdata/data3306/data/greatdb.sock
mysqlx_socket=/infokist/greatdb/dbdata/data3306/data/greatdbx.sock

max_connections=2000
max_connect_errors=1000000
open_files_limit=65535
back_log=1500
table_open_cache=10000
table_definition_cache=10000
thread_cache_size=1000

sort_buffer_size=4M
join_buffer_size=4M
read_buffer_size=4M
read_rnd_buffer_size=4M
bulk_insert_buffer_size=64M
tmp_table_size=64M
max_heap_table_size=64M
thread_stack=512K
net_buffer_length=16K
max_allowed_packet=1G

lock_wait_timeout=600
interactive_timeout=3600
wait_timeout=3600
net_read_timeout=86400
net_write_timeout=86400

log_timestamps=SYSTEM

log_error=/infokist/greatdb/logs/error3306.log
log_error_verbosity=3

slow_query_log=ON
slow_query_log_file=/infokist/greatdb/logs/slow3306.log
log_slow_verbosity=FULL
long_query_time=0.3

general_log_file=/infokist/greatdb/logs/general3306.log

log_bin=/infokist/greatdb/dbdata/data3306/log/binlog
binlog_format=ROW
sync_binlog=1
```

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```
binlog_cache_size=4M
max_binlog_cache_size=4G
max_binlog_size=1G
binlog_expire_logs_seconds=2592000
binlog_rows_query_log_events=ON
binlog_row_image=FULL
binlog_checksum=NONE
gtid_mode=ON
enforce_gtid_consistency=ON

relay_log=/infokist/greatdb/dbdata/data3306/log/relaylog

relay_log_recovery=ON
slave_parallel_type=LOGICAL_CLOCK
slave_parallel_workers=16
binlog_transaction_dependency_tracking=WRITESET
slave_preserve_commit_order=ON
slave_pending_jobs_size_max=2G
slave_max_allowed_packet=1G

transaction_isolation=READ-COMMITTED
innodb_buffer_pool_size=2G
innodb_buffer_pool_instances=8
innodb_max_dirty_pages_pct=50

innodb_data_file_path=ibdata1:12M:autoextend

innodb_temp_data_file_path=ibtmp1:12M:autoextend:max:50G

innodb_log_group_home_dir=/infokist/greatdb/dbdata/data3306/log
innodb_flush_log_at_trx_commit=1
innodb_log_buffer_size=32M
innodb_log_file_size=1G
innodb_log_files_in_group=4

innodb_undo_directory=/infokist/greatdb/dbdata/data3306/log
innodb_max_undo_log_size=4G

innodb_open_files=65535
innodb_flush_method=O_DIRECT
innodb_flush_neighbors=0
innodb_flush_sync=ON
innodb_io_capacity=10000
innodb_io_capacity_max=20000
innodb_lru_scan_depth=4000
innodb_lock_wait_timeout=30
innodb_print_all_deadlocks=ON
innodb_online_alter_log_max_size=4G
innodb_print_ddl_logs=ON
innodb_read_io_threads=8
innodb_write_io_threads=8
innodb_doublewrite_pages=64
innodb_adaptive_hash_index=OFF
innodb_status_file=OFF
```

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```
core-file
innodb_buffer_pool_in_core_file=OFF

performance_schema=ON
performance_schema_show_processlist=ON
performance_schema_events_statements_history_size=1024
performance_schema_consumer_events_statements_history_long=ON

loose-plugin_load_add='mysql_clone.so'

[mysqldump]
quick
net_buffer_length=16K

[mysql]
no_auto_rehash
default_character_set=utf8mb4
```

8. 初始化实例

```
cd /opt/greatdb/svr/greatdb
./bin/greatdbd --defaults-file=/opt/greatdb/conf/greatdb3306.cnf --initialize-insecure
```

9. 检查日志

```
tail -f /infokist/greatdb/logs/error3306.log
```

10. 启动数据库服务

```
sudo systemctl start greatdb-3306
```

11. 登录数据库，修改用户密码和权限（此时 root 密码是空的）

```
登录数据库
./bin/greatdb --socket=/infokist/greatdb/dbdata/data3306/data/greatdb.sock


修改 root@localhost 密码
alter user 'root'@'localhost' identified by 'password';


创建 greatdb@%,root@% 账号
create user 'greatdb'@'%' identified by 'password';
create user 'root'@'%' identified by 'password';


赋权root@%
GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, RELOAD, SHUTDOWN, PROCESS, FILE,
↪REFERENCES, INDEX, ALTER, SHOW DATABASES, SUPER, CREATE TEMPORARY TABLES, LOCK TABLES,
↪EXECUTE, REPLICATION SLAVE, REPLICATION CLIENT, CREATE VIEW, SHOW VIEW, CREATE ROUTINE,
↪ALTER ROUTINE, CREATE USER, EVENT, TRIGGER, CREATE TABLESPACE, CREATE ROLE, DROP ROLE ON
↪*.* TO `root`@`%` WITH GRANT OPTION;
```

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```
GRANT APPLICATION_PASSWORD_ADMIN,AUDIT_ABORT_EXEMPT,AUDIT_ADMIN,AUTHENTICATION_POLICY_
↪ADMIN,BACKUP_ADMIN,BINLOG_ADMIN,BINLOG_ENCRYPTION_ADMIN,CLONE_ADMIN,CONNECTION_ADMIN,
↪ENCRYPTION_KEY_ADMIN,FIREWALL_EXEMPT,FLUSH_OPTIMIZER_COSTS,FLUSH_STATUS,FLUSH_TABLES,
↪FLUSH_USER_RESOURCES,GROUP_REPLICATION_ADMIN,GROUP_REPLICATION_STREAM,INNODB_REDO_LOG_
↪ARCHIVE,INNODB_REDO_LOG_ENABLE,PASSWORDLESS_USER_ADMIN,PERSIST_RO_VARIABLES_ADMIN,
↪REPLICATION_APPLIER,REPLICATION_SLAVE_ADMIN,RESOURCE_GROUP_ADMIN,RESOURCE_GROUP_USER,
↪ROLE_ADMIN,SENSITIVE_VARIABLES_OBSERVER,SERVICE_CONNECTION_ADMIN,SESSION_VARIABLES_ADMIN,
↪SET_USER_ID,SHOW_ROUTINE,SYSTEM_USER,SYSTEM_VARIABLES_ADMIN,TABLE_ENCRYPTION_ADMIN,XA_
↪RECOVER_ADMIN ON *.* TO `root`@`%` WITH GRANT OPTION;

GRANT PROXY ON ``@`` TO `root`@`%` WITH GRANT OPTION;


赋权 greatdb@%
GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, RELOAD, SHUTDOWN, PROCESS, FILE,
↪REFERENCES, INDEX, ALTER, SHOW DATABASES, SUPER, CREATE TEMPORARY TABLES, LOCK TABLES,
↪EXECUTE, REPLICATION SLAVE, REPLICATION CLIENT, CREATE VIEW, SHOW VIEW, CREATE ROUTINE,
↪ALTER ROUTINE, CREATE USER, EVENT, TRIGGER, CREATE TABLESPACE, CREATE ROLE, DROP ROLE ON
↪*.* TO `greatdb`@`%`;

GRANT APPLICATION_PASSWORD_ADMIN,AUDIT_ABORT_EXEMPT,AUDIT_ADMIN,AUTHENTICATION_POLICY_
↪ADMIN,BACKUP_ADMIN,BINLOG_ADMIN,BINLOG_ENCRYPTION_ADMIN,CLONE_ADMIN,CONNECTION_ADMIN,
↪ENCRYPTION_KEY_ADMIN,FIREWALL_EXEMPT,FLUSH_OPTIMIZER_COSTS,FLUSH_STATUS,FLUSH_TABLES,
↪FLUSH_USER_RESOURCES,GROUP_REPLICATION_ADMIN,GROUP_REPLICATION_STREAM,INNODB_REDO_LOG_
↪ARCHIVE,INNODB_REDO_LOG_ENABLE,PASSWORDLESS_USER_ADMIN,PERSIST_RO_VARIABLES_ADMIN,
↪REPLICATION_APPLIER,REPLICATION_SLAVE_ADMIN,RESOURCE_GROUP_ADMIN,RESOURCE_GROUP_USER,
↪ROLE_ADMIN,SENSITIVE_VARIABLES_OBSERVER,SERVICE_CONNECTION_ADMIN,SESSION_VARIABLES_ADMIN,
↪SET_USER_ID,SHOW_ROUTINE,SYSTEM_USER,SYSTEM_VARIABLES_ADMIN,TABLE_ENCRYPTION_ADMIN,XA_
↪RECOVER_ADMIN ON *.* TO `greatdb`@`%` ;

GRANT PROXY ON ``@`` TO `greatdb`@`%`;
```

12. 登录数据库验证测试

```
./bin/greatdb -h127.0.0.1 -P3306 -u greatdb -p
select user(), current_user();
create database test;
use test;
create table test.t1(id int primary key, c1 int, c2 int, c3 int);
insert into test.t1 values(1,1,1,1);
alter table test.t1 add Column  mid int;
show create table test.t1 \G;
```

4.1 设置环境变量

```
ln -s /opt/greatdb/svr/greatdb/bin/greatdb /usr/bin/mysql
ln -s /opt/greatdb/svr/greatdb/bin/greatdbdump /usr/bin/mysqldump

mysql --version   ##检查 mysql 版本
mysqldump --version   ##检查 mysqldump 版本
```

4.2 配置 Catalog

```
/opt/scutech/dbackup3/bin/config connector mysql --base host=127.0.0.1 --port=3306 --
↪user=root --password=password
/etc/init.d/dbackup3-backupd stop
/opt/scutech/dbackup3/bin/migrate sqlite mysql
sed -i 's/-m common/-m common --no-single-transaction/g' /etc/opt/scutech/dbackup3/backupd/
↪database.d/base.conf
/etc/init.d/dbackup3-backupd restart
```

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