Sharding（分库分表与读写分离）

> **原则**
>
> 单表行数超过500万行或者单表容量超过2GB，才推荐进行分库分表。
>
> 如果预计三年后的数据量根本达不到这个级别，请不要在创建表时分库分表。

Apache ShardingJDBC

> 内嵌，轻量。支持多种数据库。

系统中添加依赖：

```
                        <dependency>
                                <groupId>io.shardingsphere</groupId>
                                <artifactId>sharding-jdbc-spring-boot-
starter</artifactId>
                        </dependency>
```

代码样例：

```
@Configuration
public class MyShardingJDBCConfiguration extends ShardingJDBCConfiguration
{
}
```

配置文件样例：

```
spring.shardingsphere.datasource.names=ds0,ds1

spring.shardingsphere.datasource.ds0.type=org.apache.commons.dbcp.
BasicDataSource
spring.shardingsphere.datasource.ds0.driver-class-name=com.mysql.jdbc.
Driver
spring.shardingsphere.datasource.ds0.url=jdbc:mysql://localhost:3306/ds0
spring.shardingsphere.datasource.ds0.username=root
spring.shardingsphere.datasource.ds0.password=

spring.shardingsphere.datasource.ds1.type=org.apache.commons.dbcp.
BasicDataSource
spring.shardingsphere.datasource.ds1.driver-class-name=com.mysql.jdbc.
Driver
spring.shardingsphere.datasource.ds1.url=jdbc:mysql://localhost:3306/ds1
spring.shardingsphere.datasource.ds1.username=root
spring.shardingsphere.datasource.ds1.password=

spring.shardingsphere.sharding.tables.t_order.actual-data-nodes=ds$->{0..
1}.t_order$->{0..1}
spring.shardingsphere.sharding.tables.t_order.table-strategy.inline.
sharding-column=order_id
spring.shardingsphere.sharding.tables.t_order.table-strategy.inline.
algorithm-expression=t_order$->{order_id % 2}
spring.shardingsphere.sharding.tables.t_order.key-generator.column=order_id
spring.shardingsphere.sharding.tables.t_order_item.actual-data-nodes=ds$->
{0..1}.t_order_item$->{0..1}
spring.shardingsphere.sharding.tables.t_order.key-generator.type=SNOWFLAKE
spring.shardingsphere.sharding.tables.t_order_item.table-strategy.inline.
sharding-column=order_id
spring.shardingsphere.sharding.tables.t_order_item.table-strategy.inline.
algorithm-expression=t_order_item$->{order_id % 2}
spring.shardingsphere.sharding.tables.t_order_item.key-generator.
column=order_item_id
spring.shardingsphere.sharding.tables.t_order_item.key-generator.
type=SNOWFLAKE
spring.shardingsphere.sharding.binding-tables=t_order,t_order_item
spring.shardingsphere.sharding.broadcast-tables=t_config

spring.shardingsphere.sharding.default-database-strategy.inline.sharding-
column=user_id
spring.shardingsphere.sharding.default-database-strategy.inline.algorithm-
expression=ds$->{user_id % 2}
```