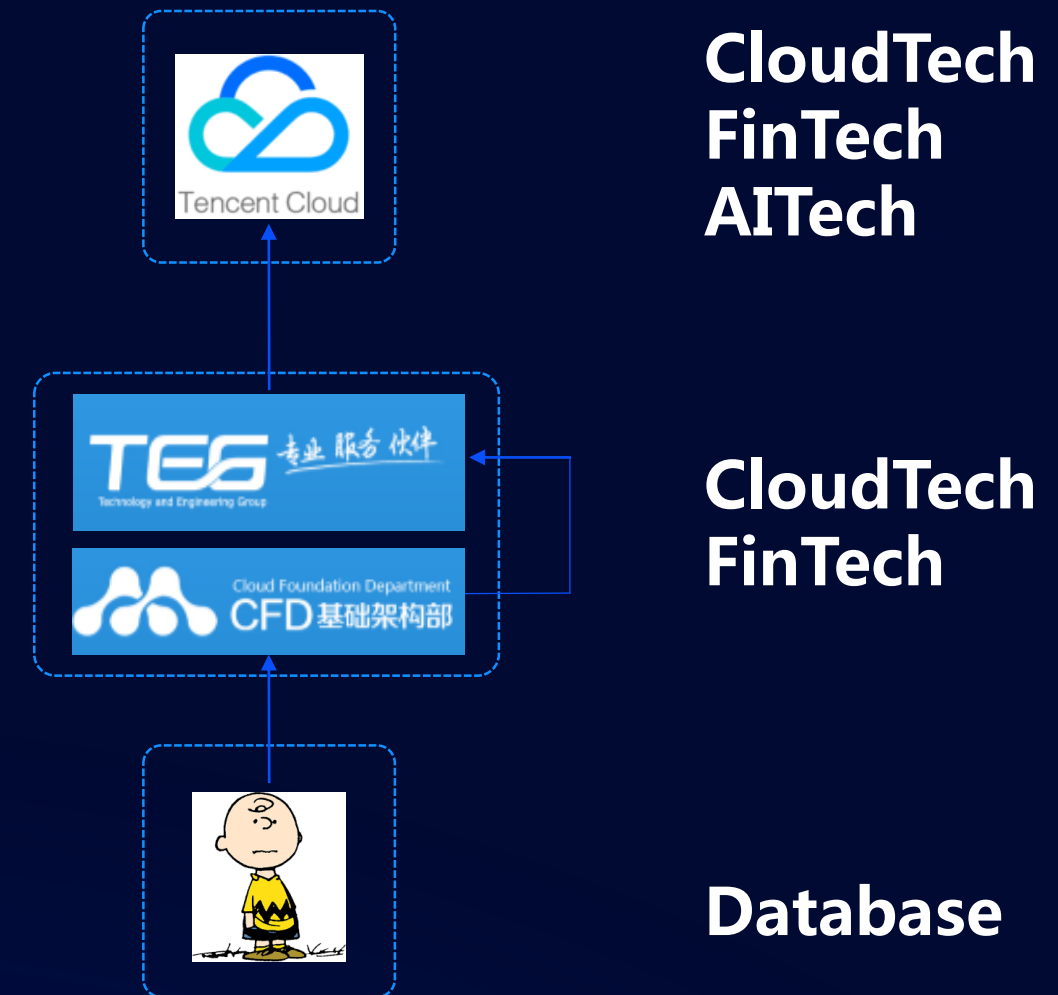


TXSQL：云计算时代数据库核弹头

腾讯云 MySQL内核研发专家 张青林

Qinglin Zhang

Expert Database Engineer@Tencent
Contact me : musazhang@tencent.com



- 1 Basics about Tencent Cloud and TXSQL
- 2 Why Do We Create TXSQL
- 3 How Do We Design TXSQL
- 4 How Do We Use TXSQL
- 5 The Future of TXSQL

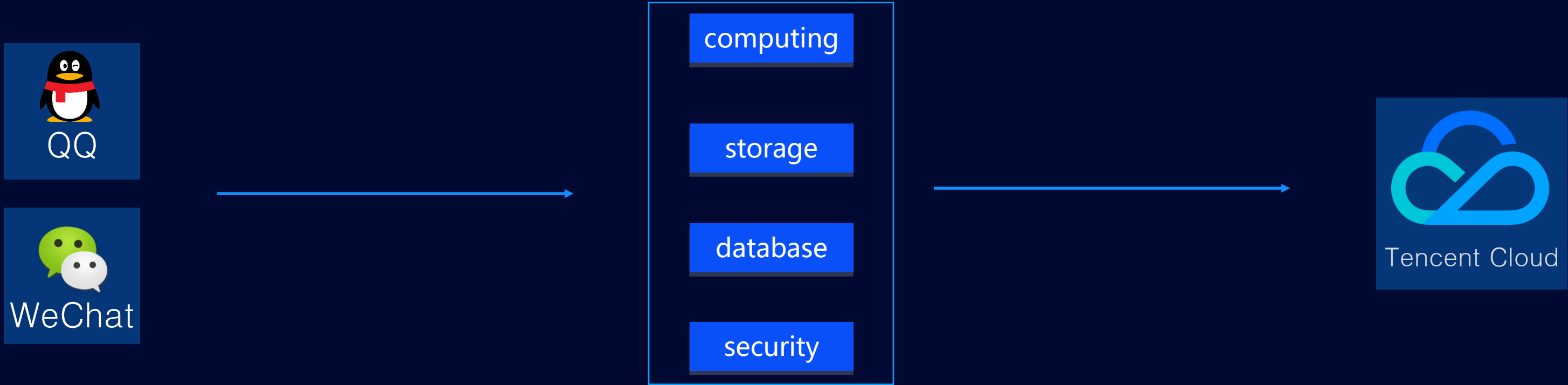
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Basics about Tencent Cloud and TXSQL

Tencent Cloud Relational Database Service



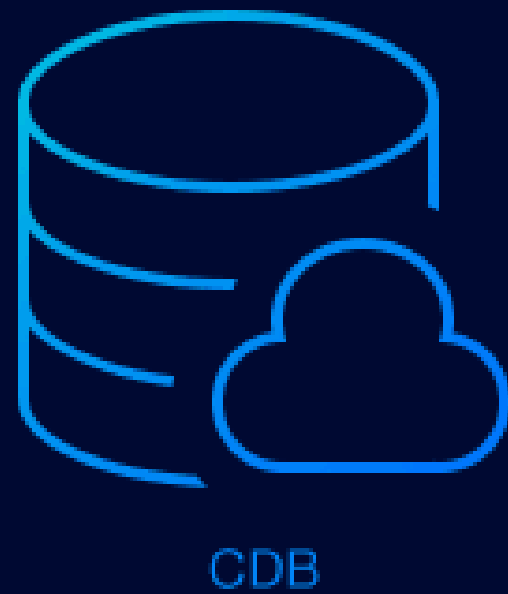
1.1 Tencent Cloud – China’s Leading Cloud Computing Service



- **Trusted by 10,000+ developers from all industries**
- **500+ Locations, 20TB+ Bandwidth**
- **3X+ Growth in 2017**

*Tencent Cloud’s 2017 information

1.2 CDB – Tencent Cloud Relational Database Service



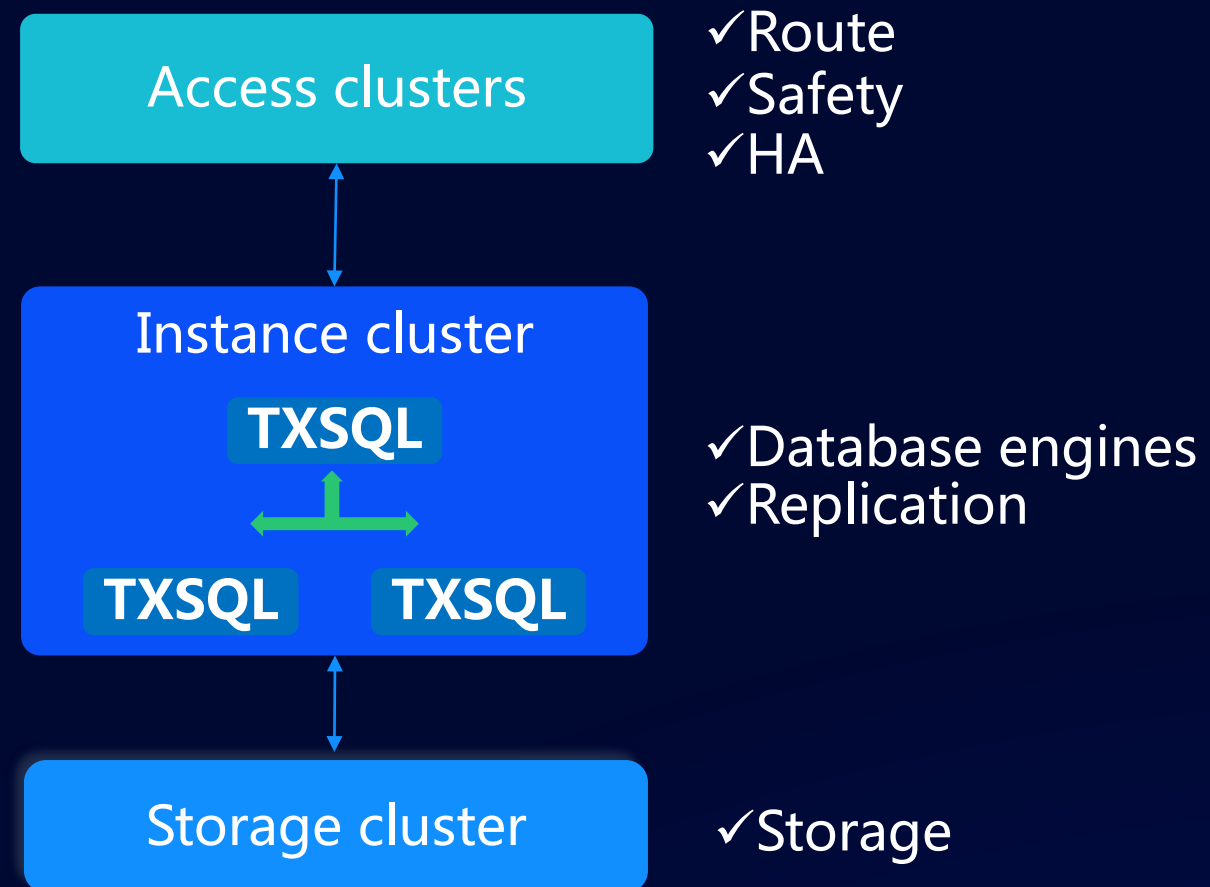
- Relational Database as a Service
- Fully Managed & Zero Admin
- Application Compatibility
- Choice of Multiple Database engines
- Tens of Thousands DB Instances, PB+ Storage



1.3 CDB Used by Customers



1.4 TXSQL – Kernel Of Cloud Database Service



- **TengXun MySQL(Tencent MySQL)**
- **MySQL Branch Maintained CDB**
- **Official designed Kernel of MySQL**

2

Motivations of Creating TXSQL

Making MySQL Faster, Better and more Stable

2.1 Fast Growth Of CDB

4+

Rapid growth of storage scale

10+

Rapid growth of Coverage scale

2.2 Major challenges

Stability

10W+

Features

Finance, IOT

Performance

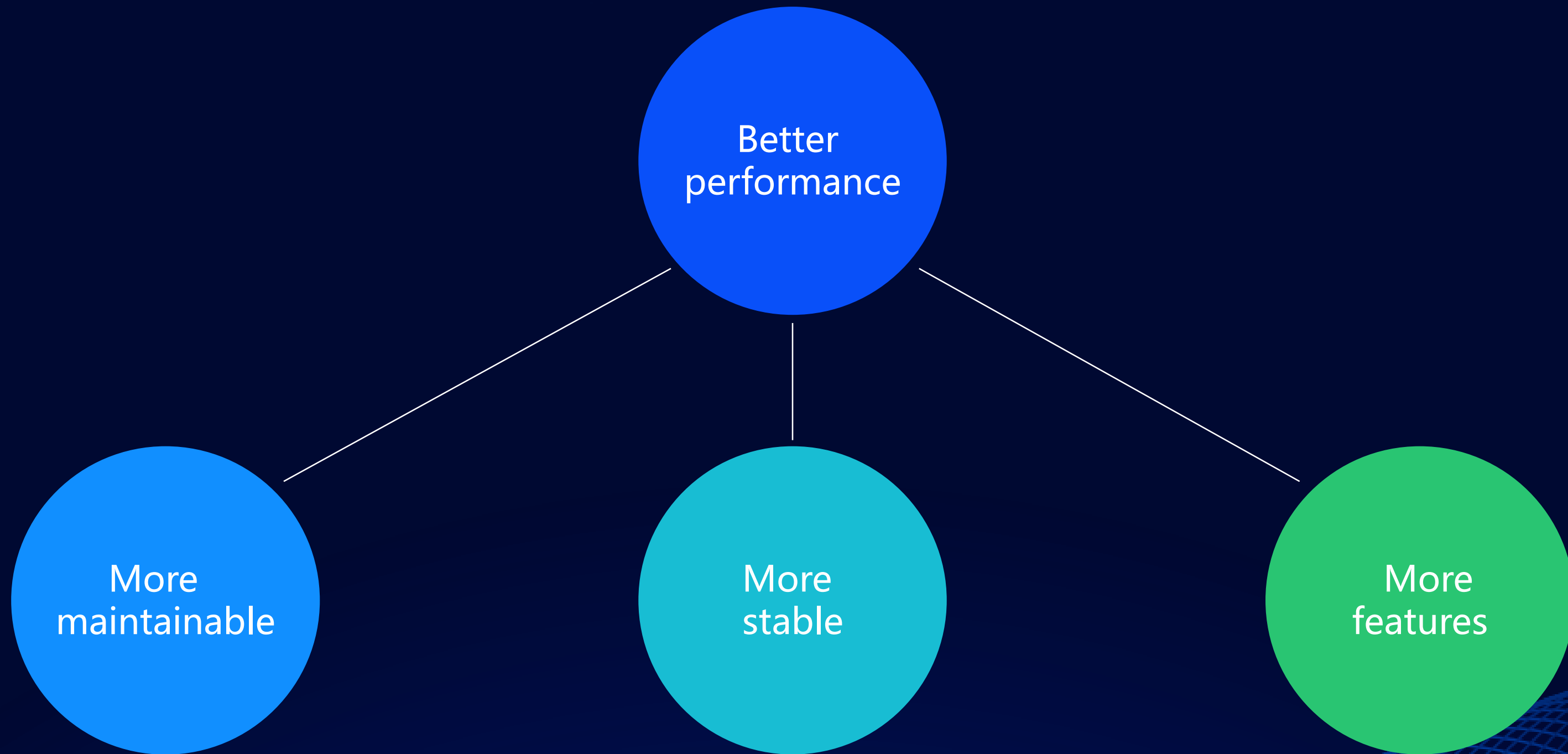
Game, E-Commerce

3

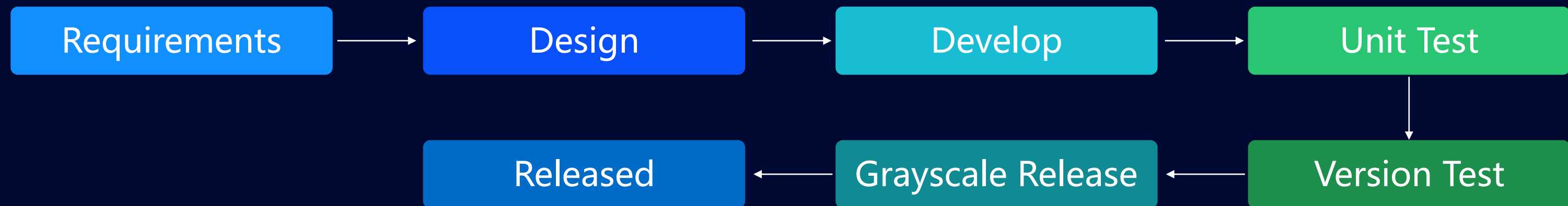
Design Art of Building TXSQL

TXSQL design model & development model

3.1 TXSQL Design Model (B3M)



3.2 TXSQL Development Model (7+ Steps)



4

The Usage of TXSQL

Performance, Enterprise Features, Stability

4.1 TXSQL Performance Usage

Res.

RT

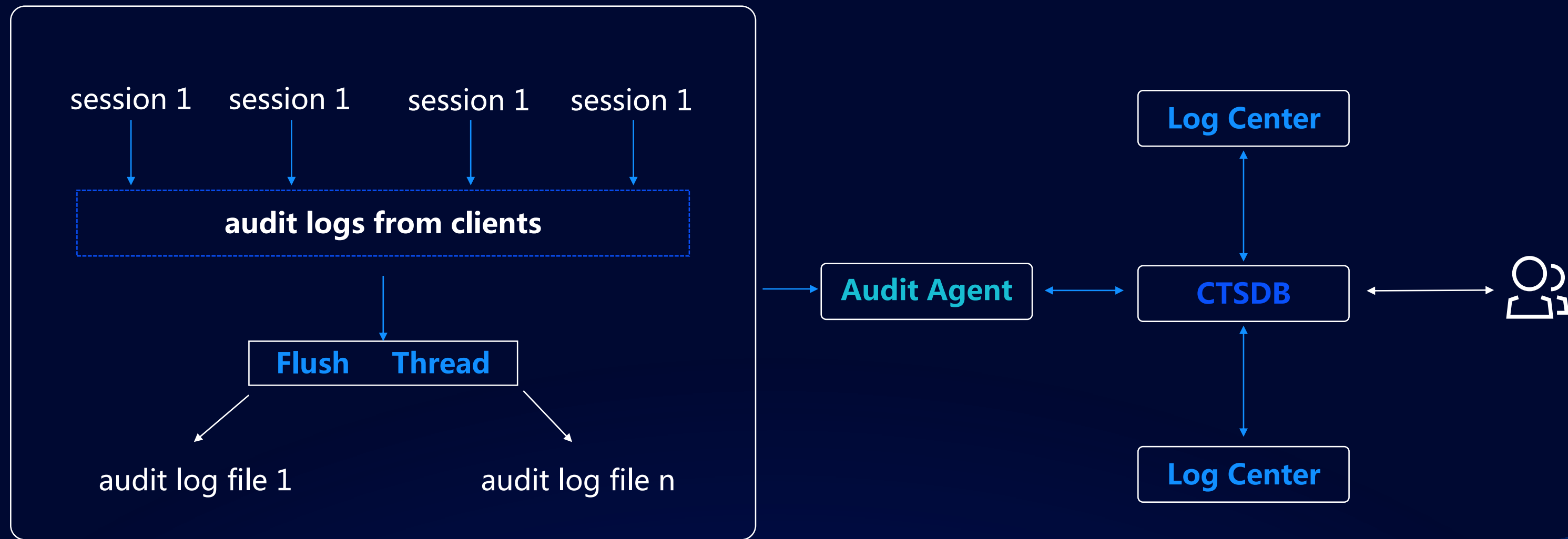
N.T

- Redo log group commit
- Dual redo log buffer
- Parallel copy redo log optimization
- Semi-sync optimization
- Select ... offset n limit m

4.2 TXSQL Enterprise Features Usage

- Audit
- Encryption
- Threadpool
- Parallel Replication

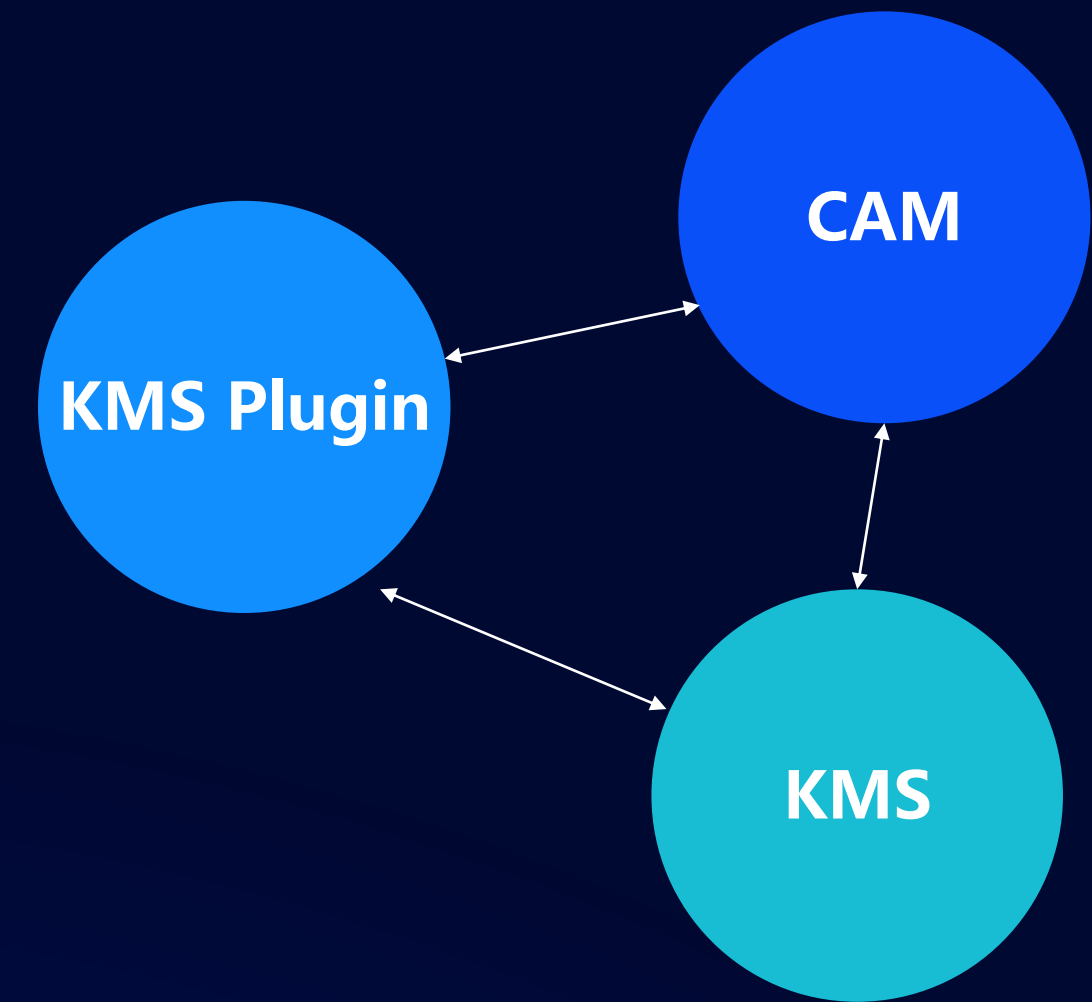
4.2.1 TXSQL Audit



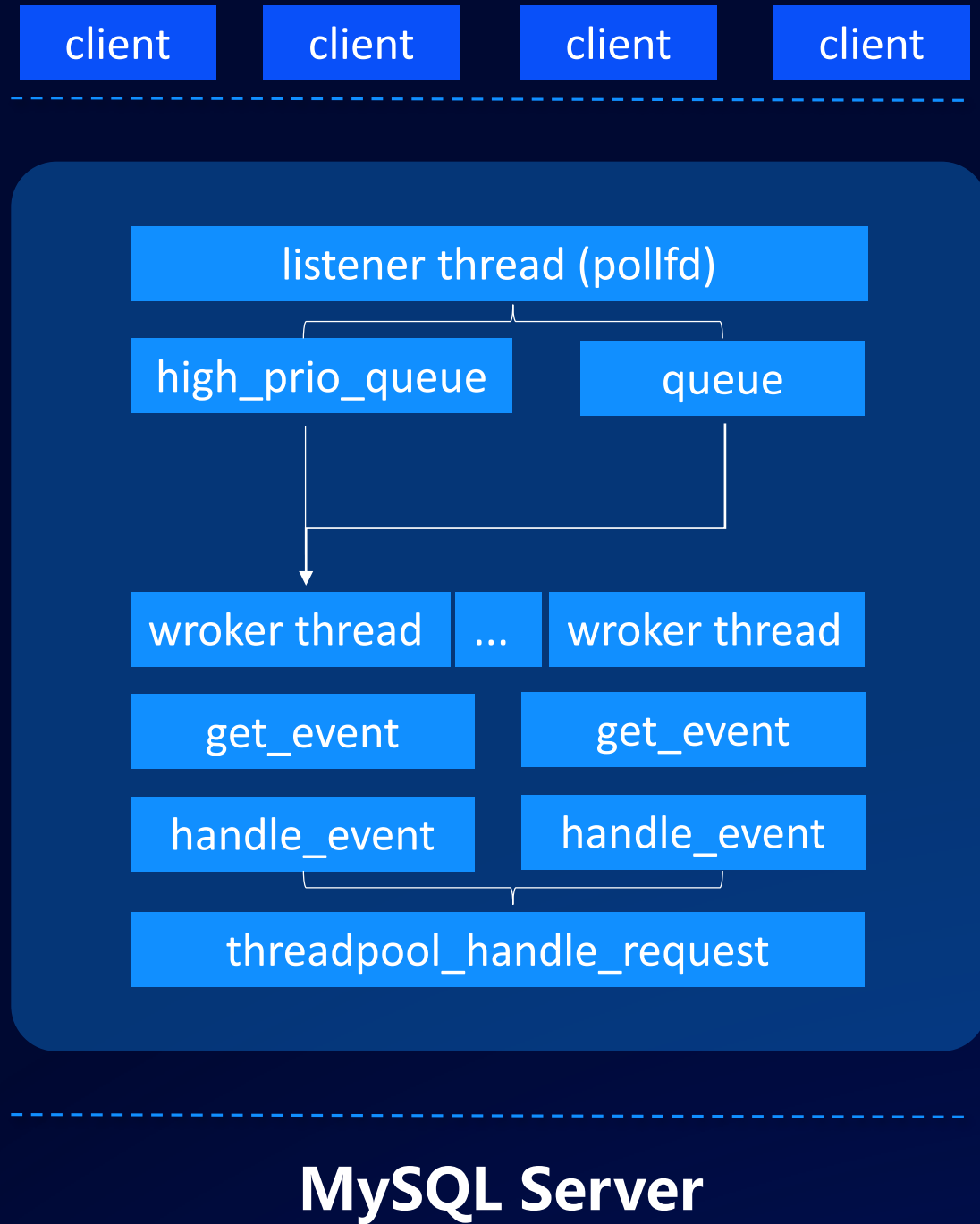
4.2.2 TXSQL Encryption

KMS : Key Management Service by Tencent Cloud

CAM : Cloud Access Management services provided by Tencent Cloud

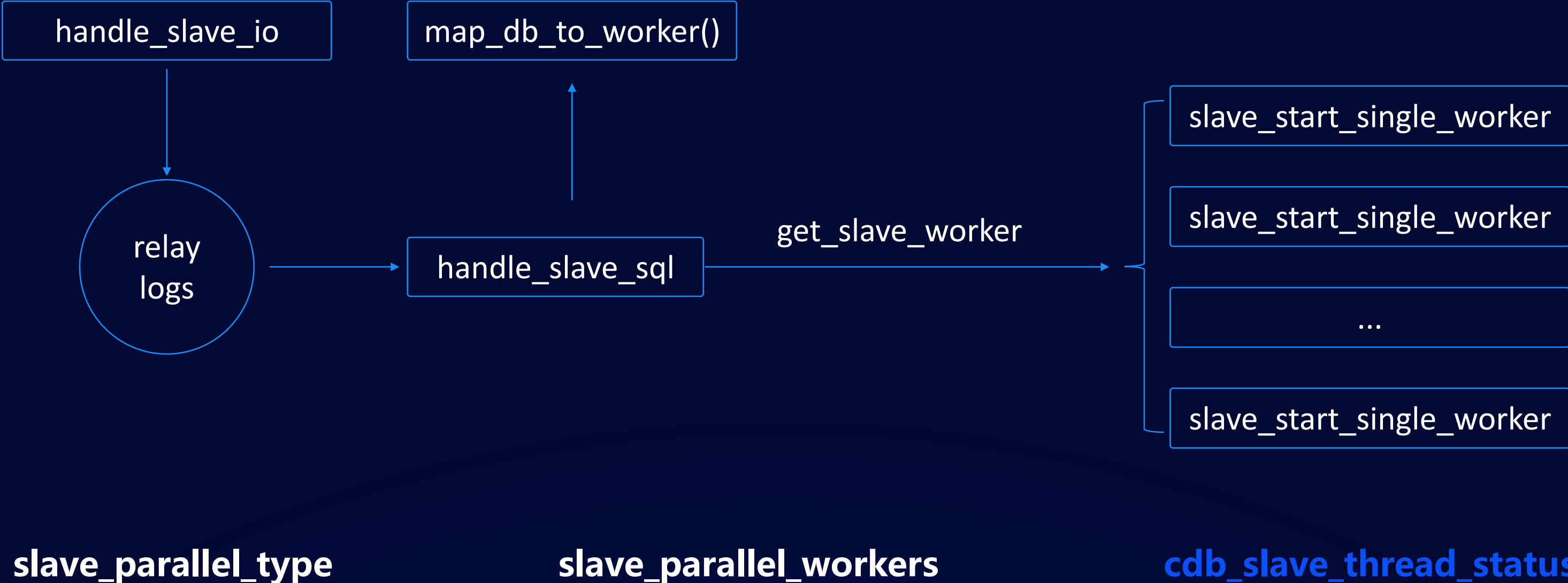


4.2.3 TXSQL Threadpool



- thread_group_oversubscribe
- thread_pool_size
- thread_handling
- thread_group_status

4.2.4 TXSQL Parallel replication



4.3 TXSQL Business Support Experiences

Games

Performance for **B1**

Finance

Financial Support for **B2**

IOT

Stability for **B3**

4.4 TXSQL Stability Guarantee

- CDB Monitor from client to DB
- OS Second-level monitoring
- TXSQL version tests
- TXSQL bug fix progress
- CDB & TXSQL Helper (24 * 7)
- AI+DBOPS

5

The Future of TXSQL

Things to do in the coming future

- Calculation pushed down to Engines
- Exec plan cache implementation
- AI + Query
- Features needed by Business
- New Engines support for massive business
- TXRocks & New CDB

Q&A



Tencent Cloud



Tencent Database Technology



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