

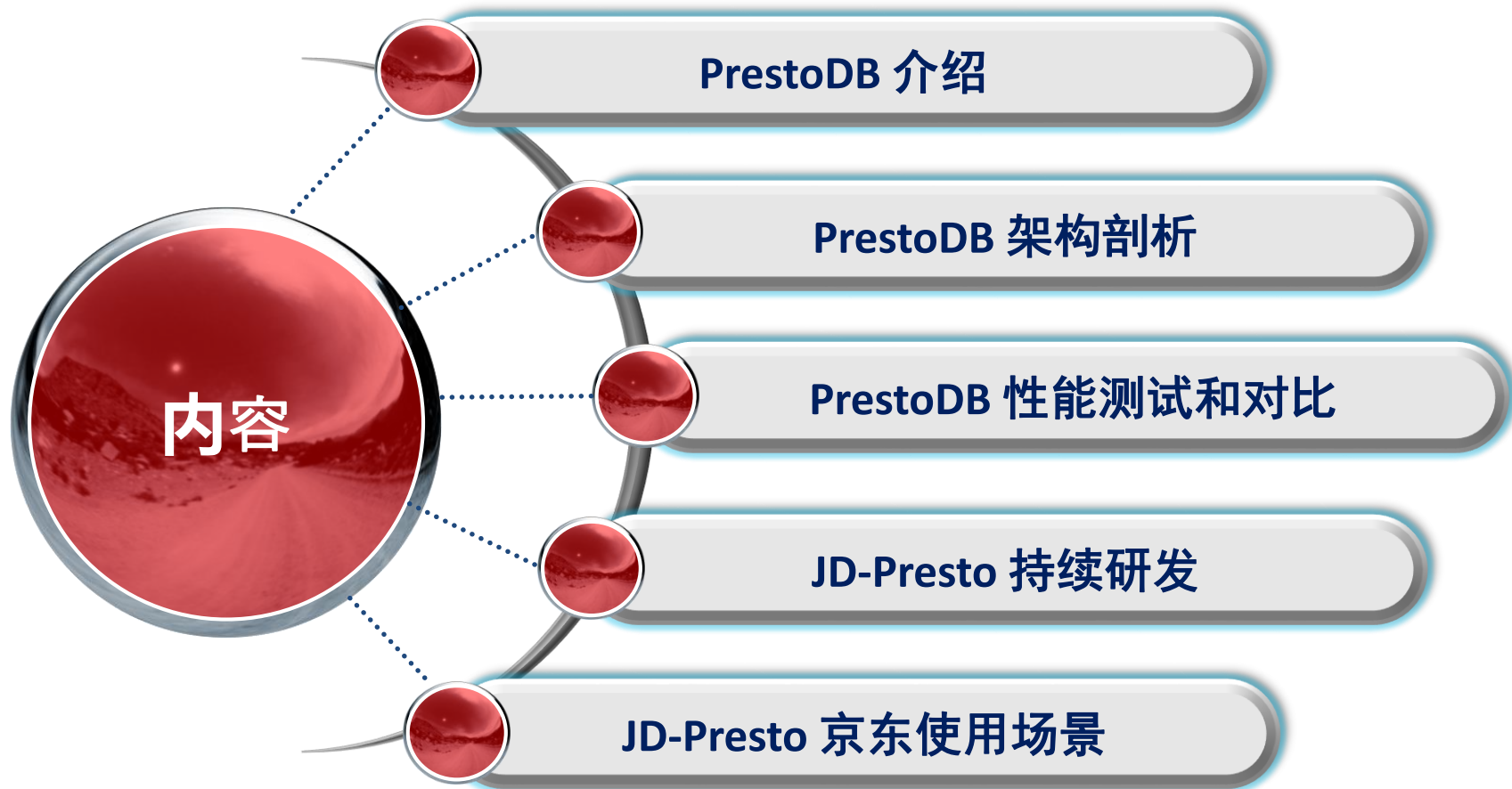
# PrestoDB在京东的应用实践

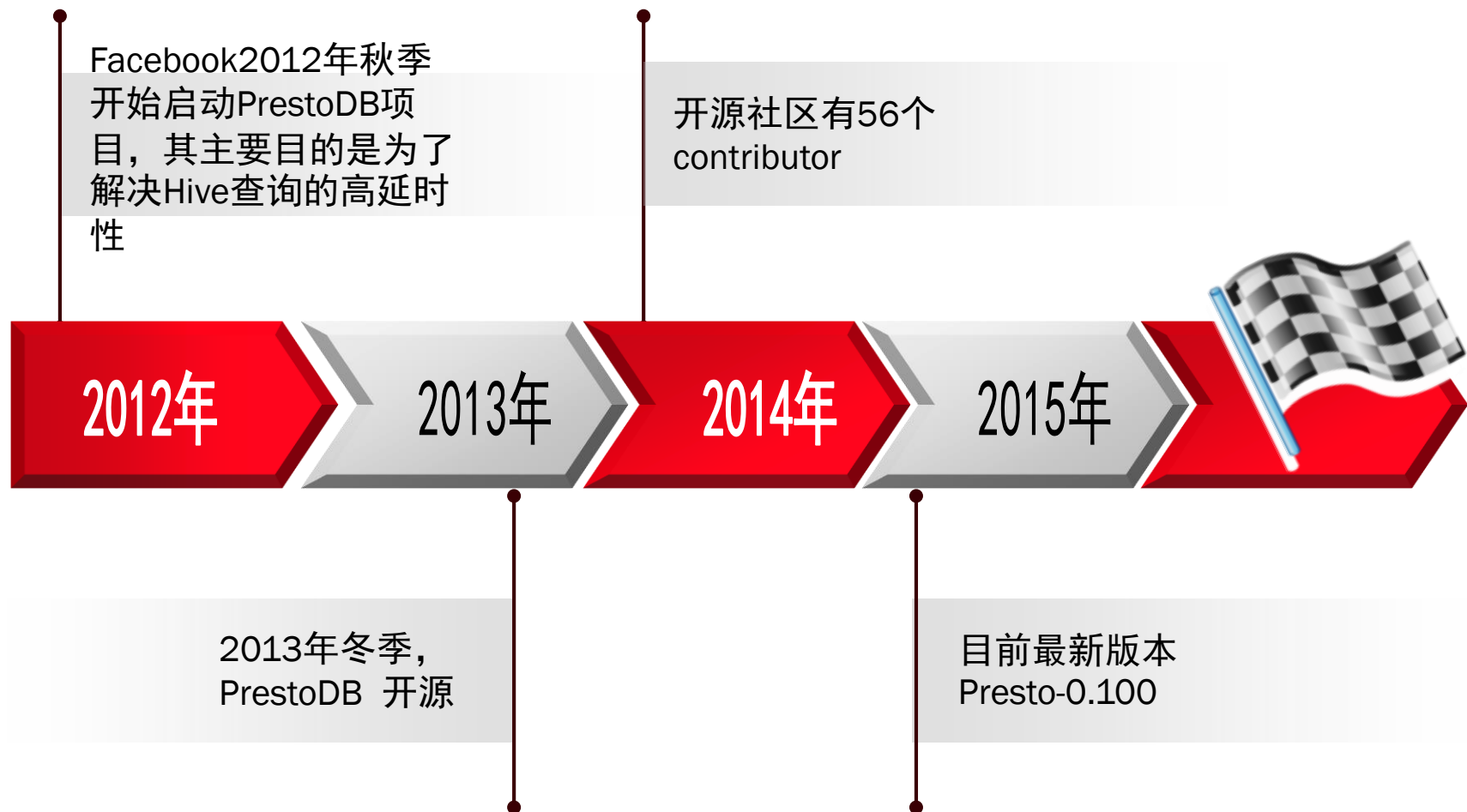
JD-运维部-数据库架构组

分享人: 吕信

邮箱: [bjlvxin@jd.com](mailto:bjlvxin@jd.com)









特性

I **Distributed SQL Query Engine**

II **Interactive data Analysis**

III **GBs to PBs**

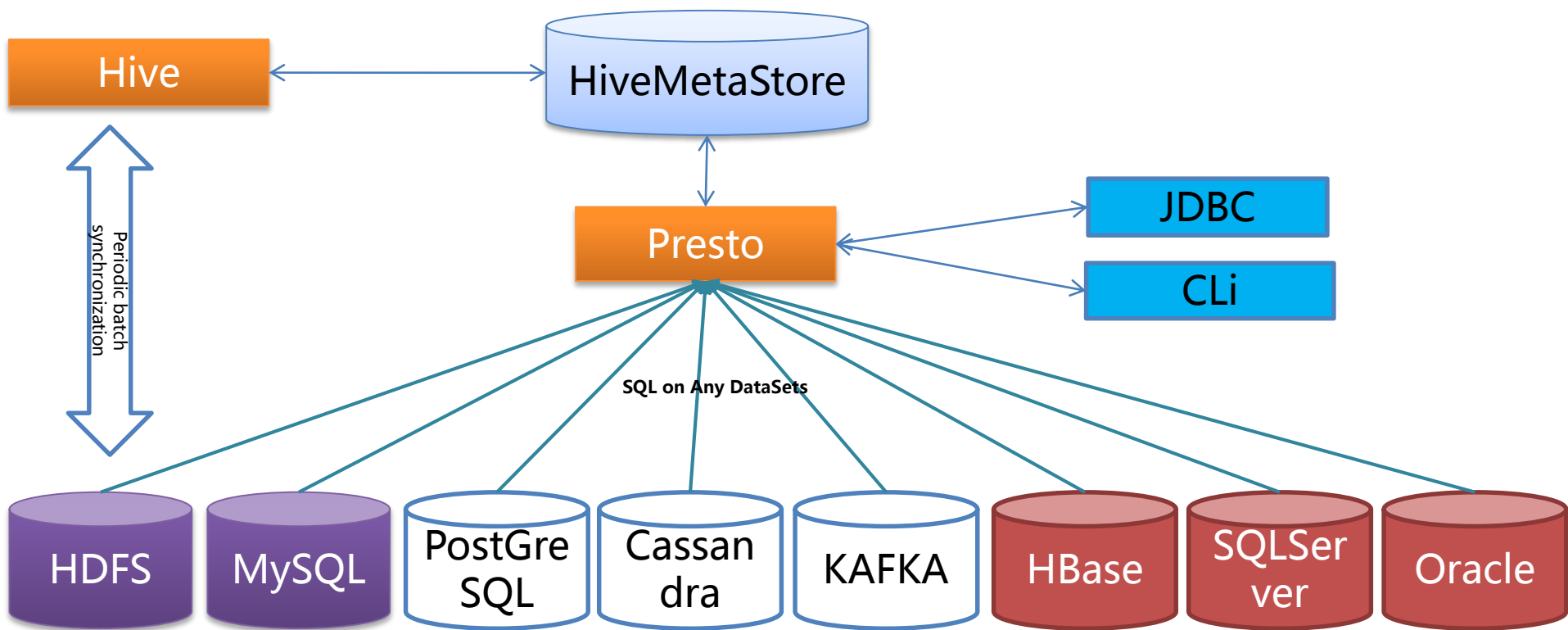
IV **Based On PipeLine**

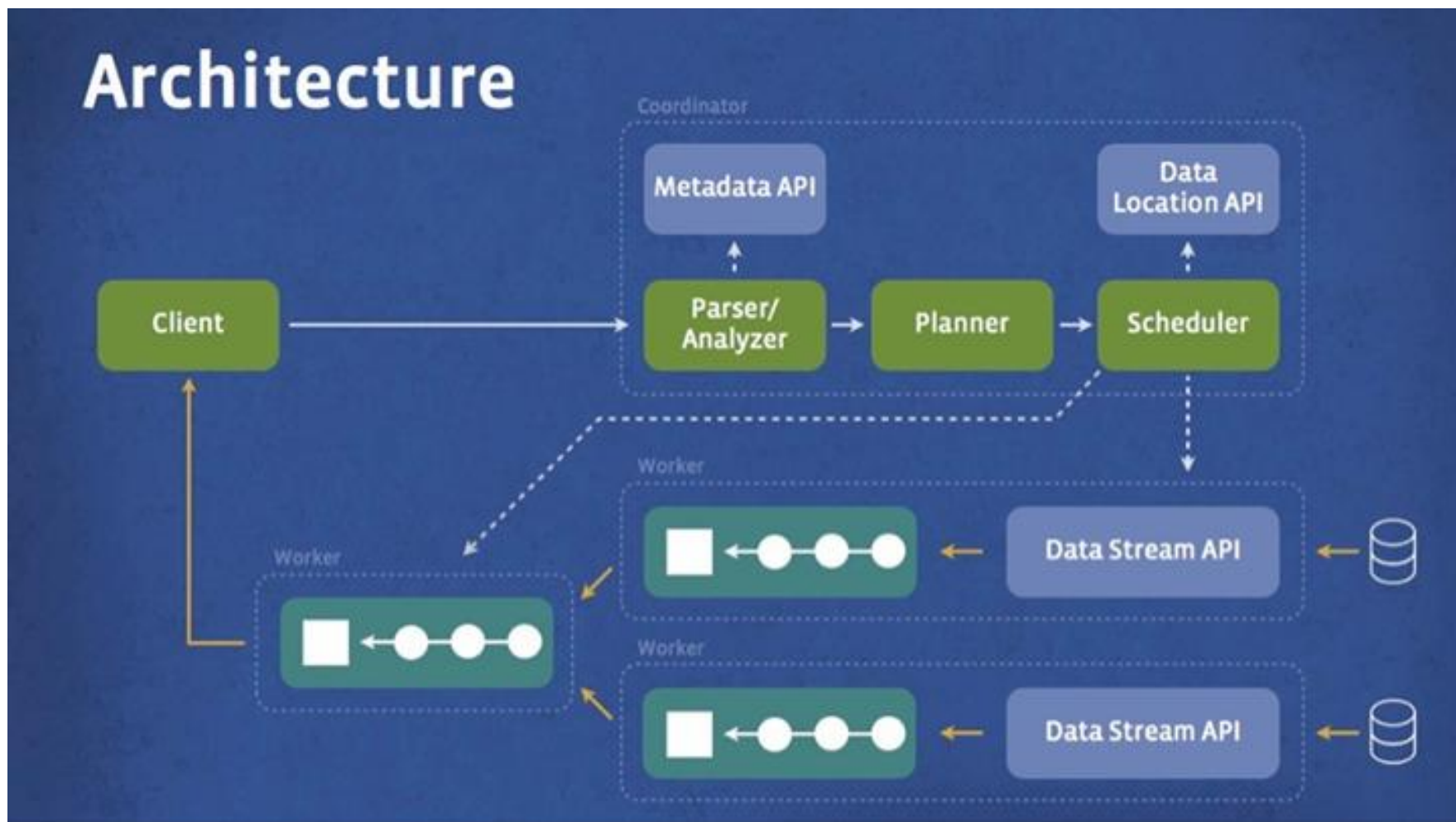
V **ANSI SQL syntax**

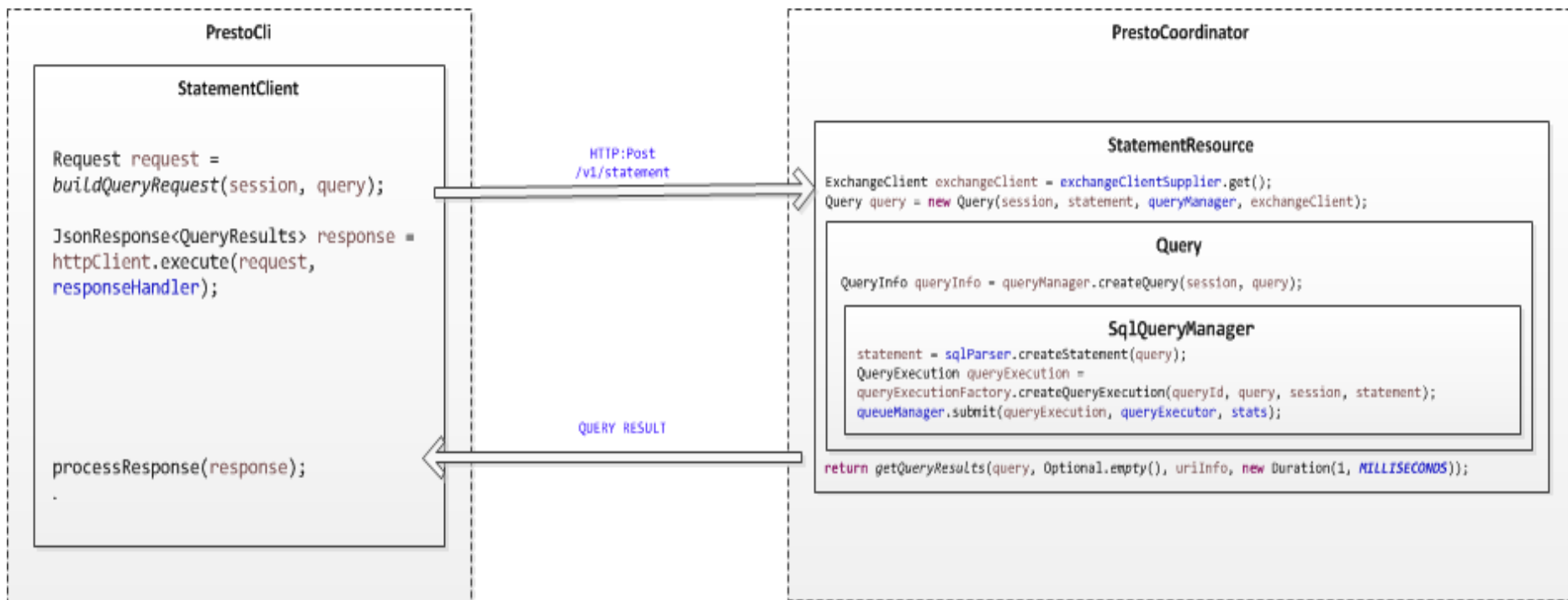
VI **Query across multiple DataSources**

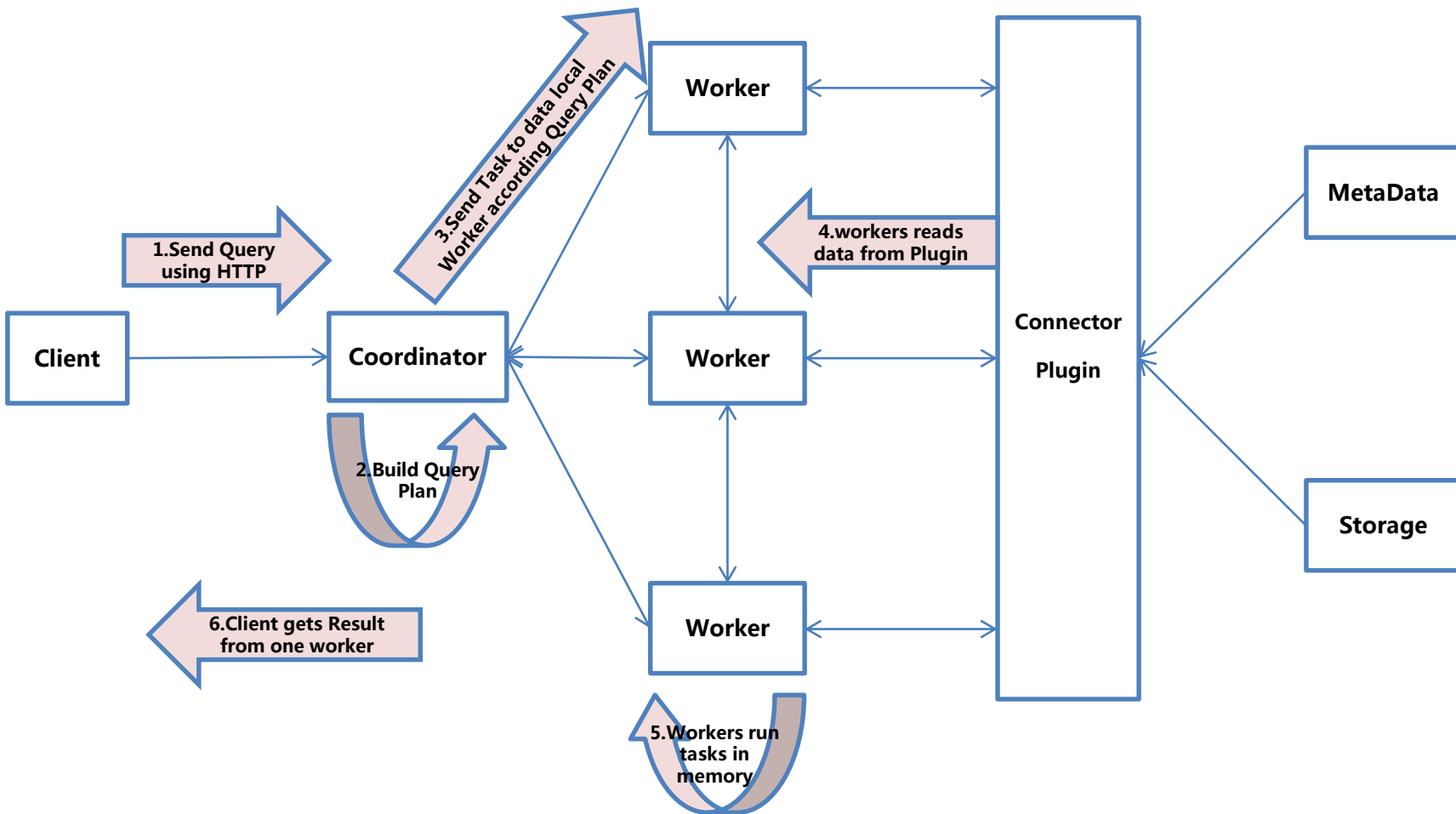
# PrestoDB架构剖析-整体架构

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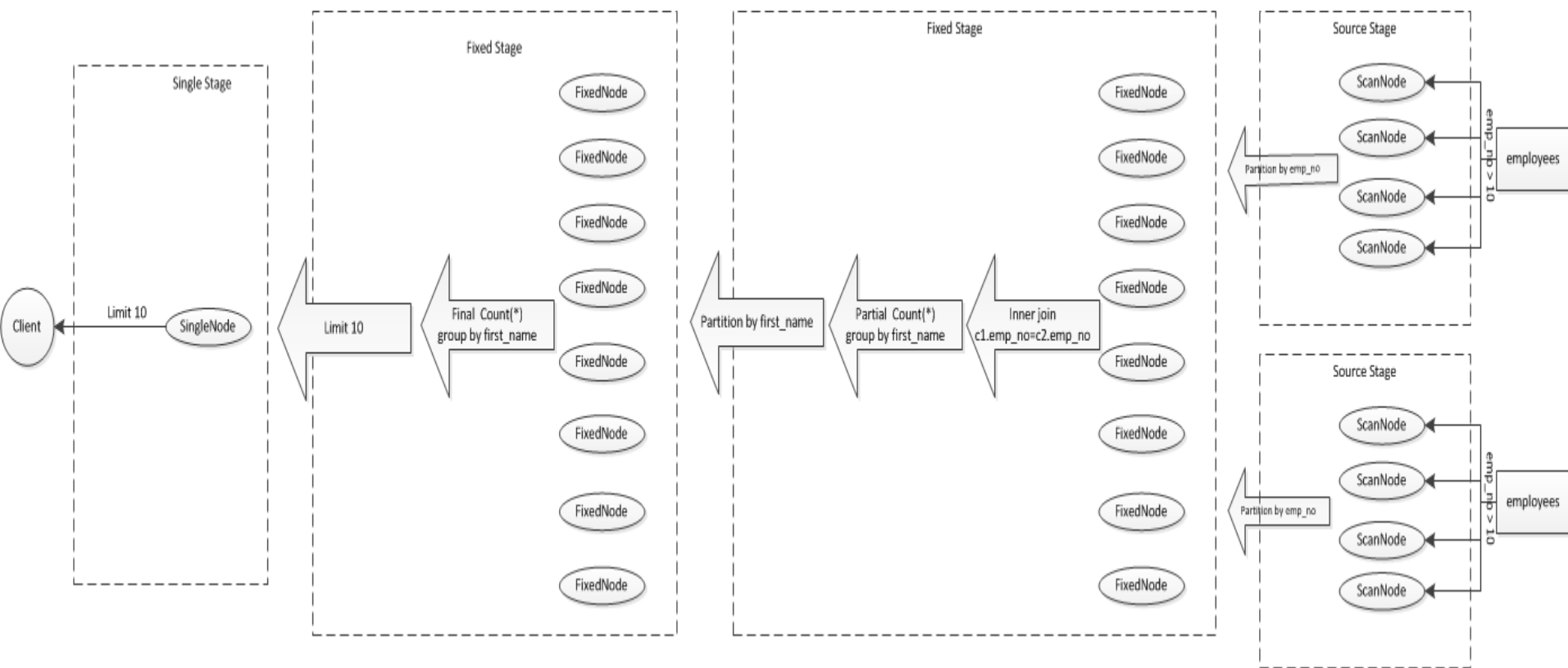






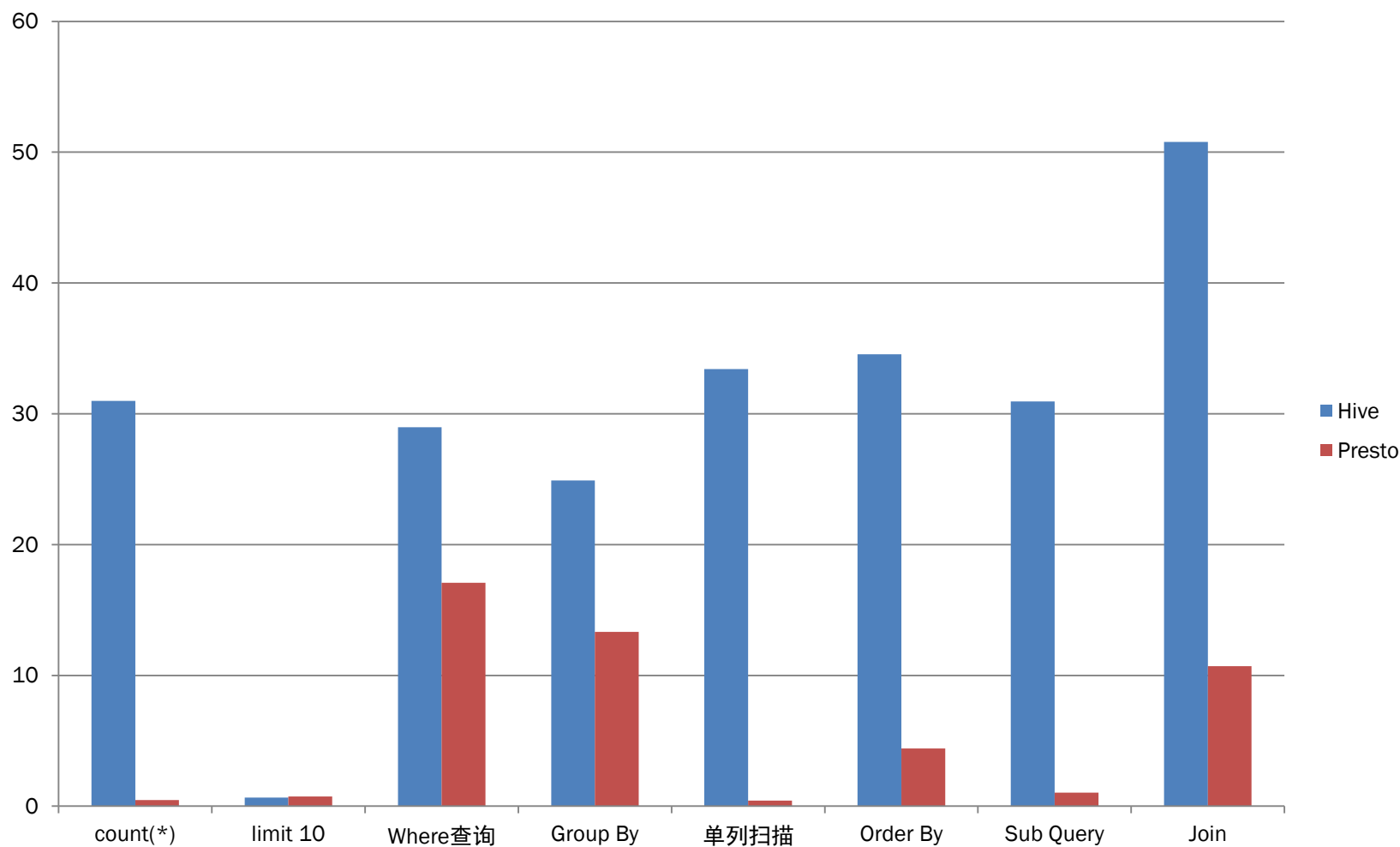


```
select c1.first_name, count(*)  
from employees c1 join employees c2  
on c1.emp_no = c2.emp_no  
where c1.emp_no > 10 group by c1.first_name limit 10;
```



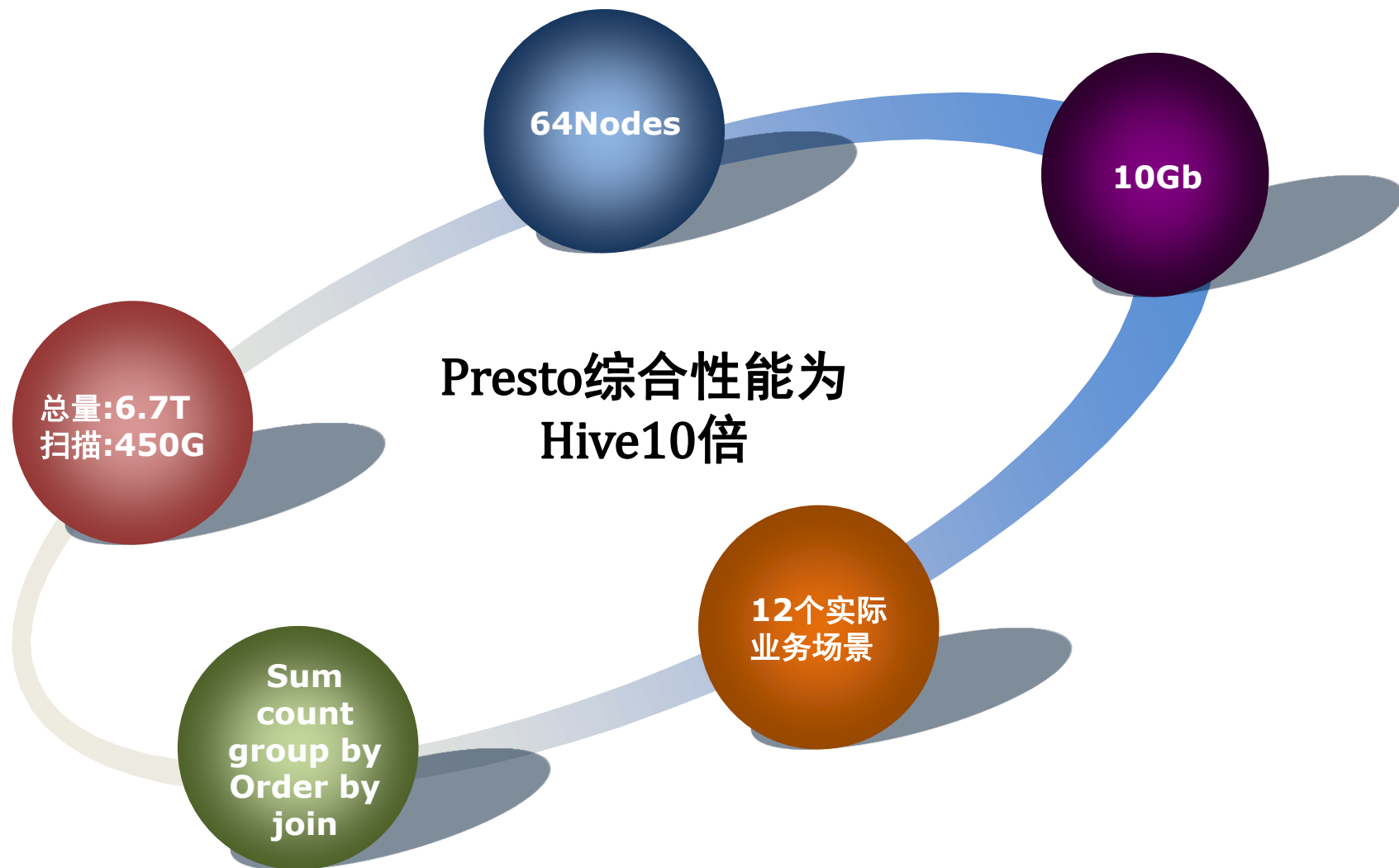
# PrestoDB -性能测试和对比

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# PrestoDB -性能测试和对比

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-----> PDBO(Presto For DataBase Optimizer)

-----> 数据量瓶颈突破

-----> PrestoDB身份认证和权限控制

-----> 对Lzo文件的支持（建议ORC或者RCFile）

-----> Insert 功能开发

-----> 实现Create声明及动态分区表

-----> Catalog动态刷新

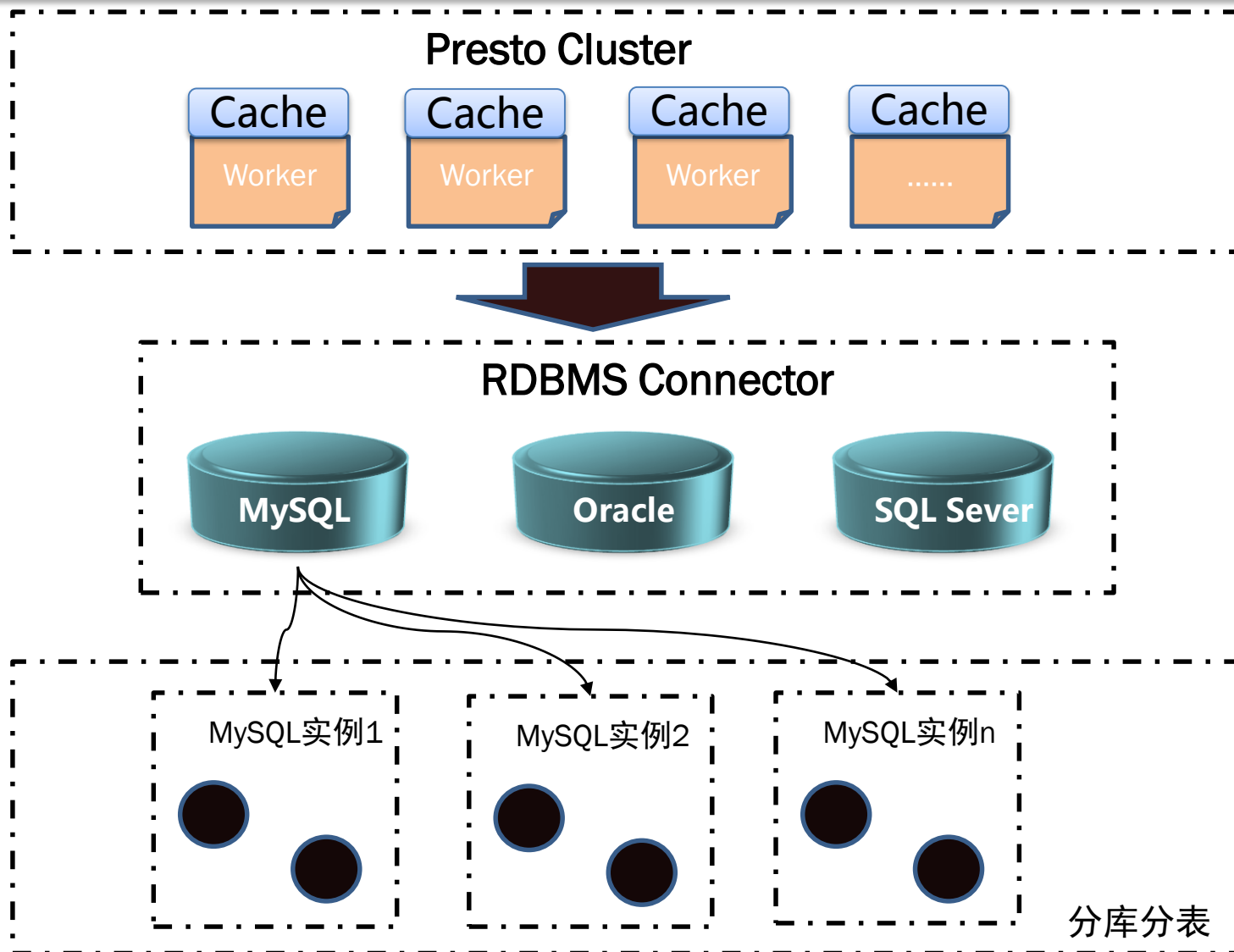
-----> Where与Join语句的隐式类型转换

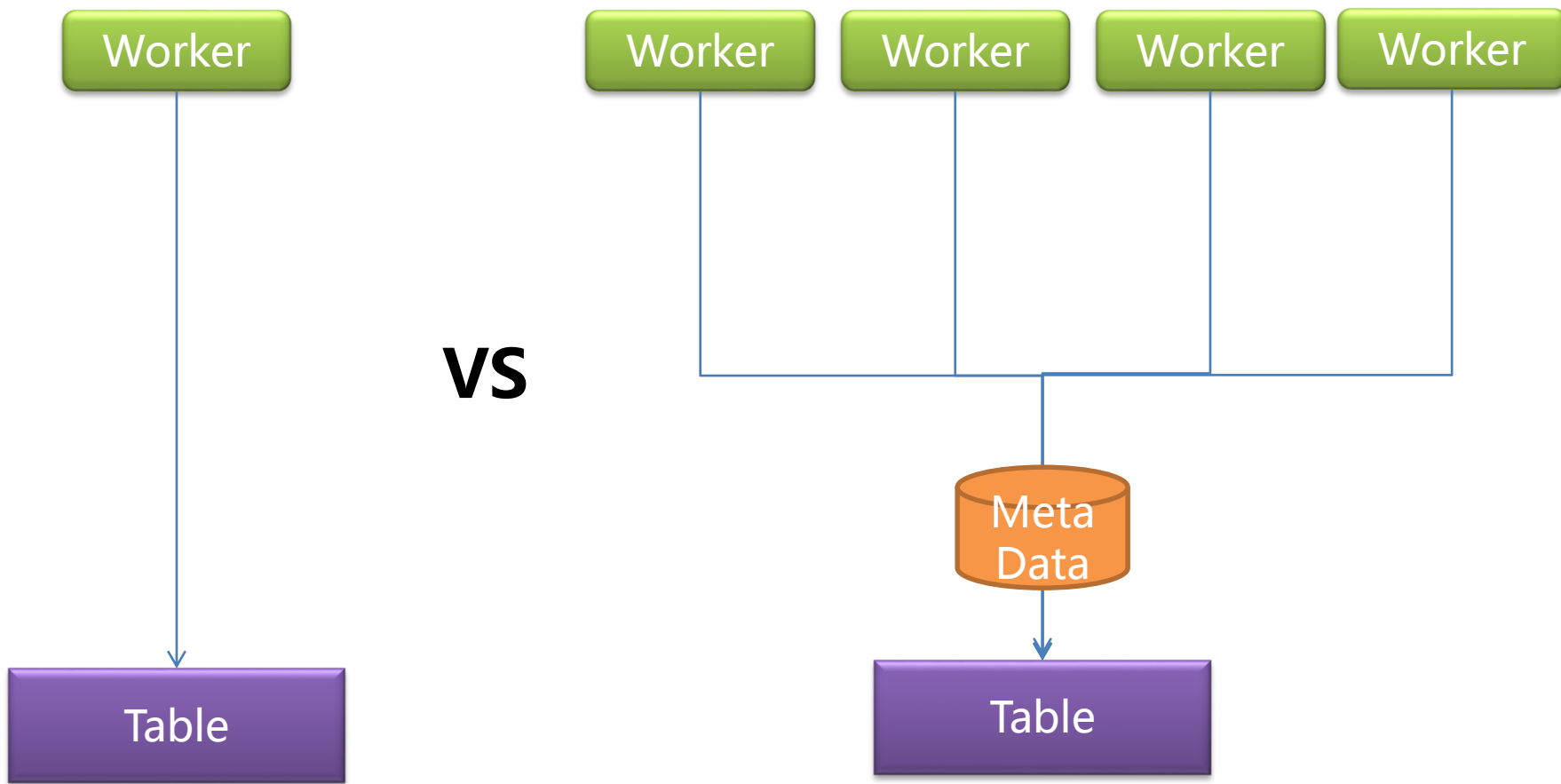
支持分库分表

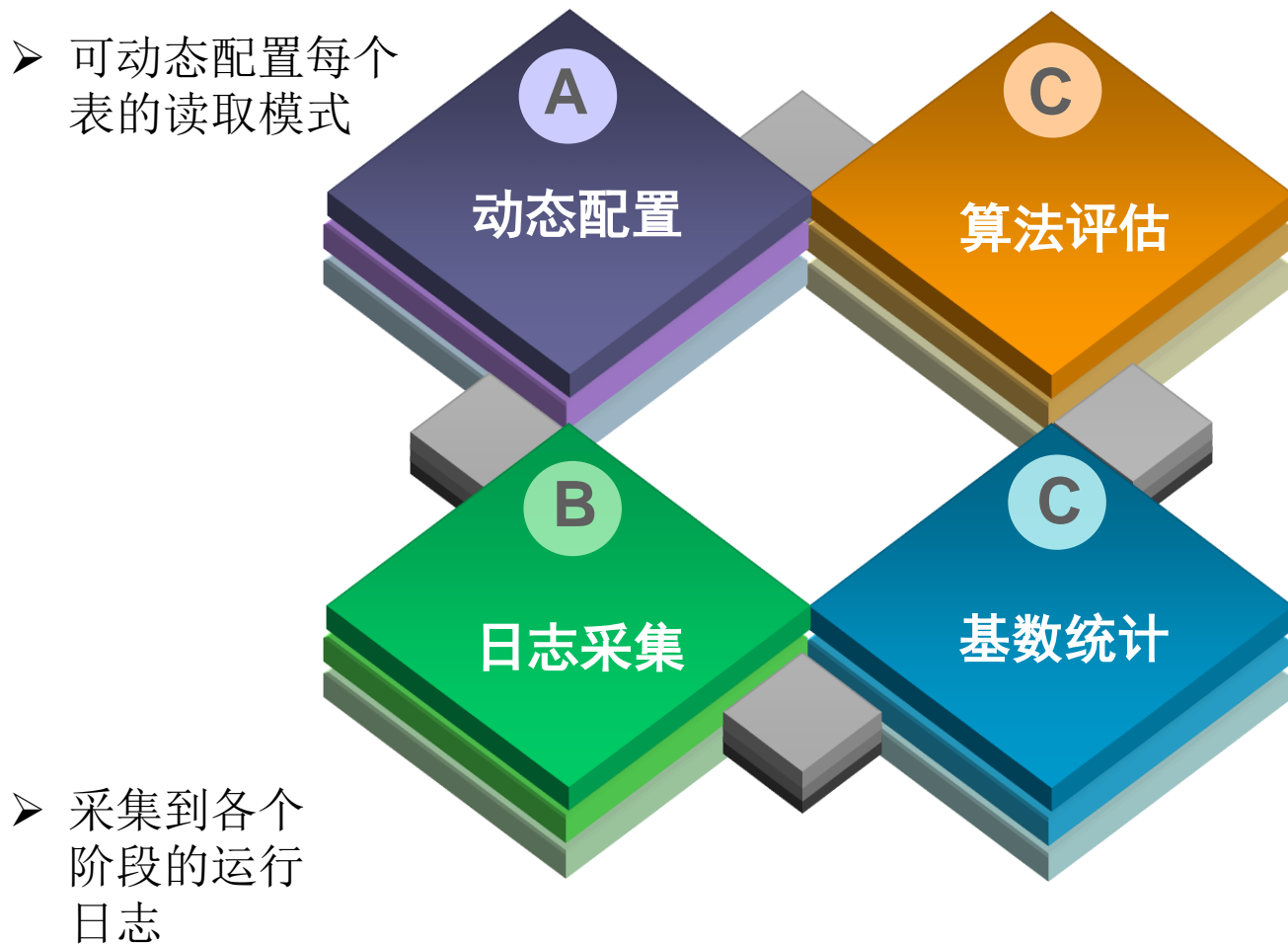
支持数据缓存

数据并行读取

性能智能优化



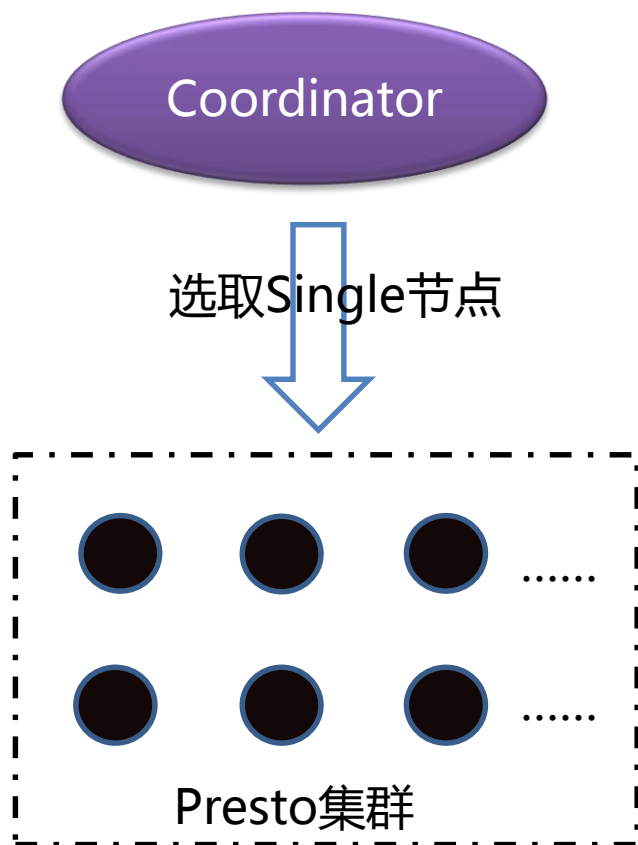




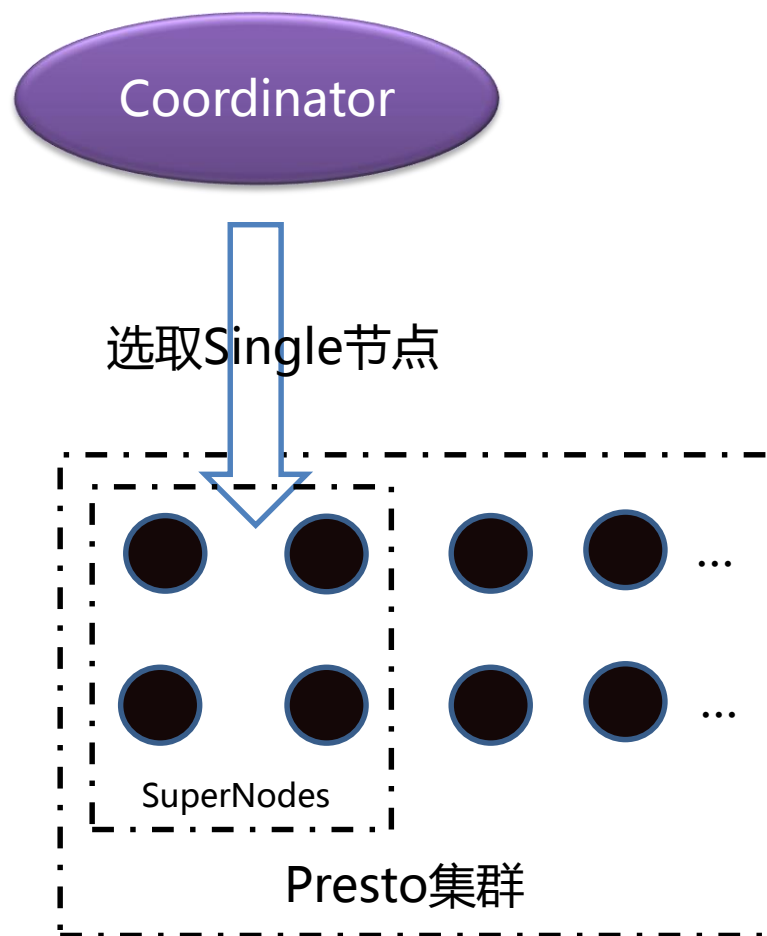
➤ 分析得出各阶段的动态步长，并将步长写入到数据库；

➤ 将统计表的各项基本数据，例如总行数，各阶段行数分布等；

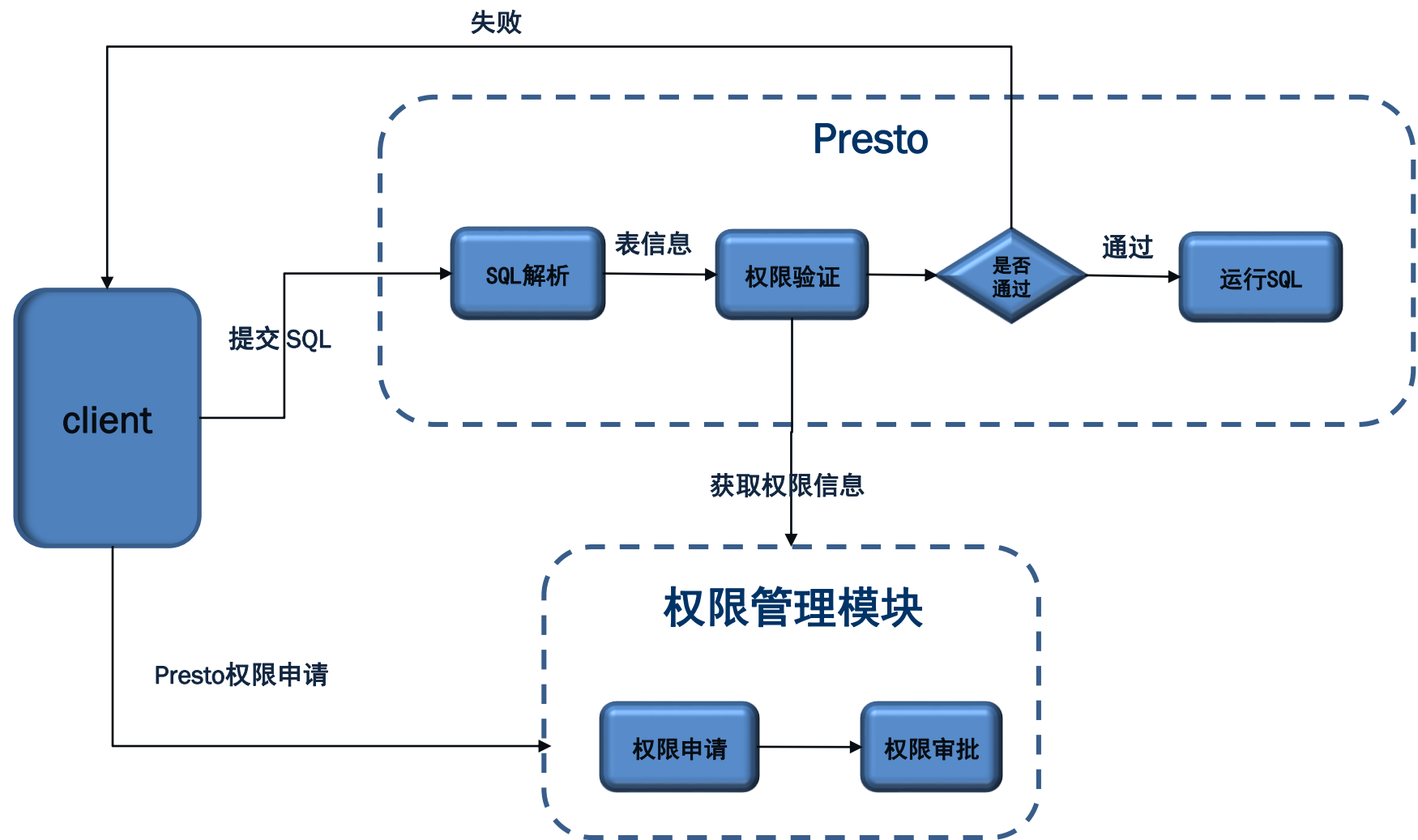




VS



# JD-PRESTO 权限控制



Insert通用语法为：

```
INSERT (INTO | OVERWRITE)  
TABLE table_name [PARTITION]  
[values] [query]
```

→ 普通的Insert数据到表中，包括单条记录的插入

→ 支持Insert into table partition语法，支持多级分区

→ 支持Insert overwrite table语法，可与partition同时使用

→ 支持Insert 动态分区

Create通用语法为：

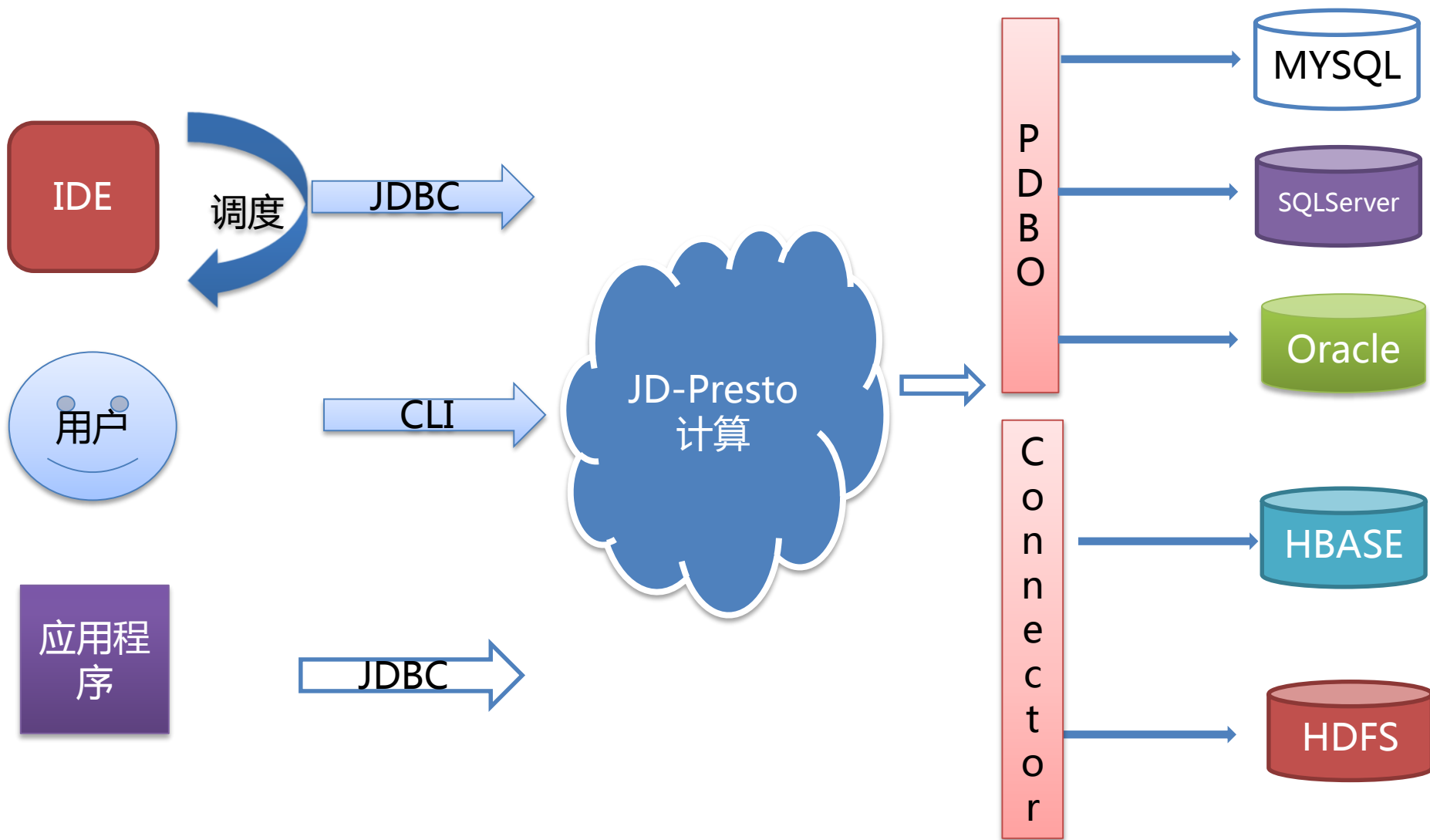
```
CREATE TABLE TABLE_NAME  
[(COLUMN_DEFINITIONS)  
[PARTITIONED BY  
(PARTITION_DEFINITIONS)]] | [[PAR  
TITION (PARTITION_NAMES)] AS  
QUERY]
```

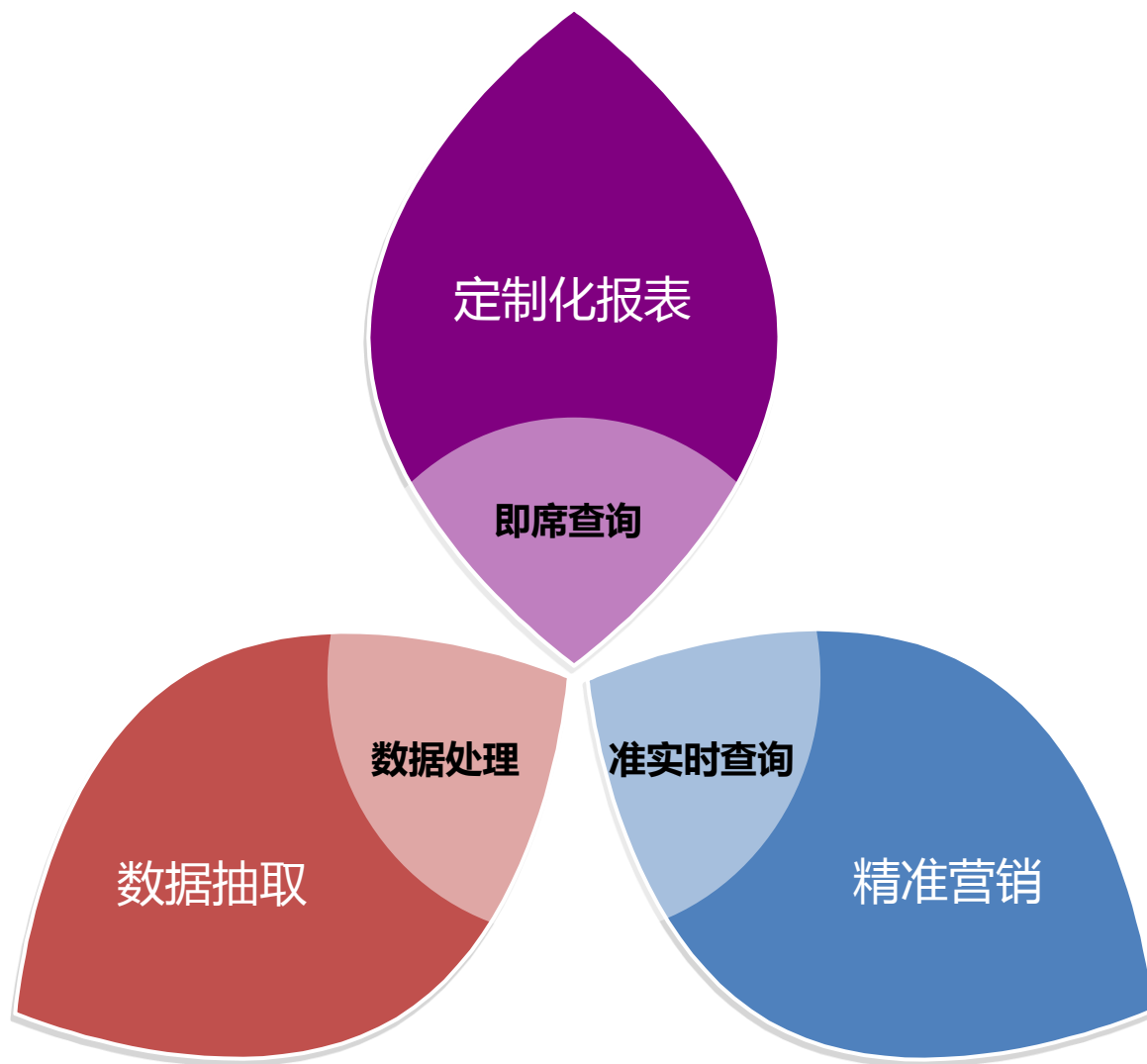
→ CREATE TABLE TABLE1 AS SELECT \* FROM  
EMPLOYEES

→ CREATE TABLE TABLE1 (ID BIGINT,NAME VARCHAR)

→ CREATE TABLE TABLE1 (ID BIGINT,NAME VARCHAR)  
PARTITIONED BY (PARTITION\_KEY VARCHAR)

→ CREATE TABLE TABLE1 PARTITION (FIRST\_NAME, LAST\_NAME)  
AS SELECT EMP\_NO,BIRTH\_DATE,GENDER,HIRE\_DATE,  
FIRST\_NAME,LAST\_NAME FROM EMPLOYEES





# Join Us!



## 联系我们

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