

映射关系

# Mycat2

logical table -> partition(targetName,schema,table)

负载均衡,  
高可用

cluster

datasource(master)

主,数据强一致

datasource(standby)

备,高可用

datasource(replica)

从,减少主的负载

同步网络

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# 数据源

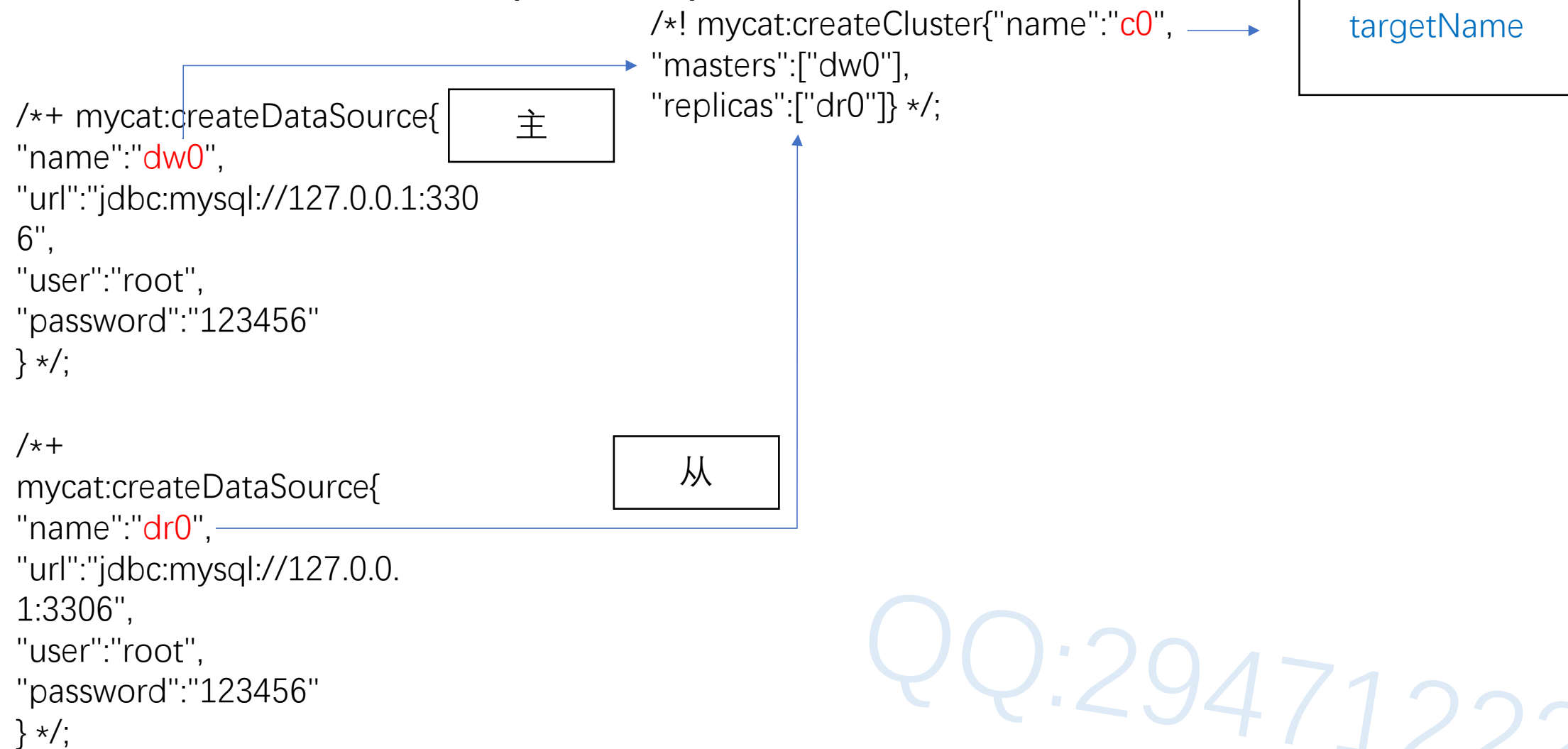
```
/*+ mycat:createDataSource{  
"name":"dw0",  
"url":"jdbc:mysql://127.0.0.1:330  
6",  
"user":"root",  
"password":"123456"  
}*/;
```

主

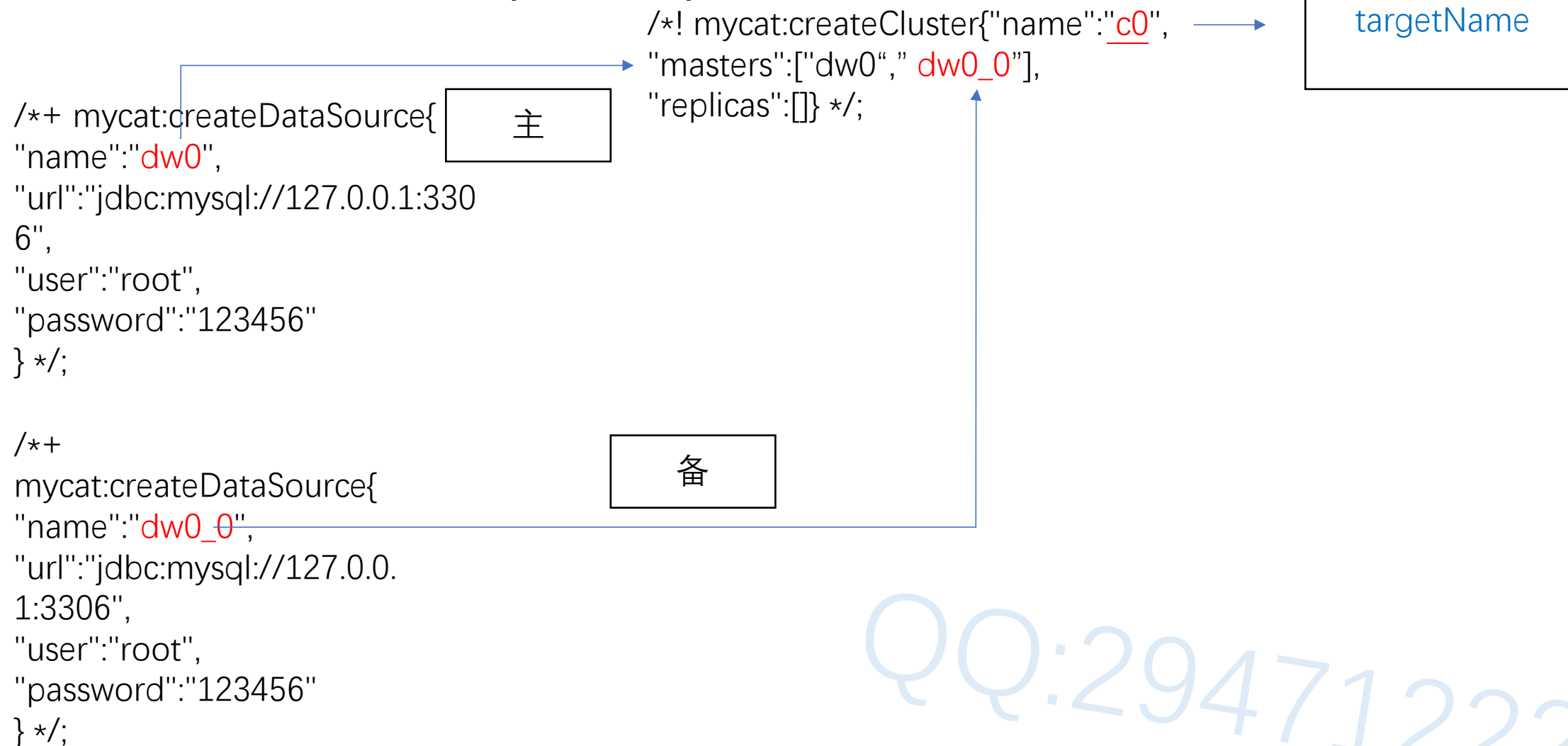
targetName

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# 数据源与集群(主从)

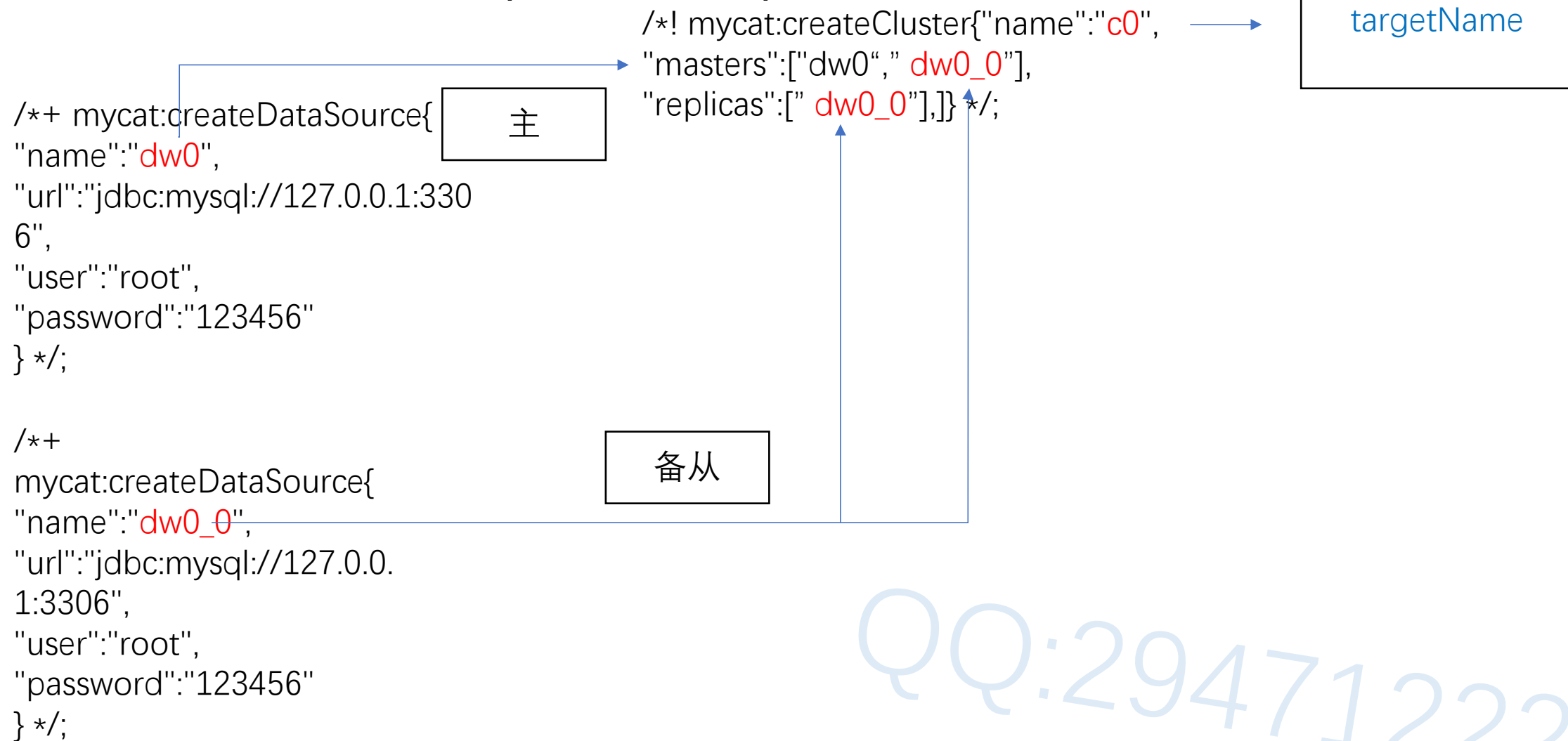


# 数据源与集群(主备)

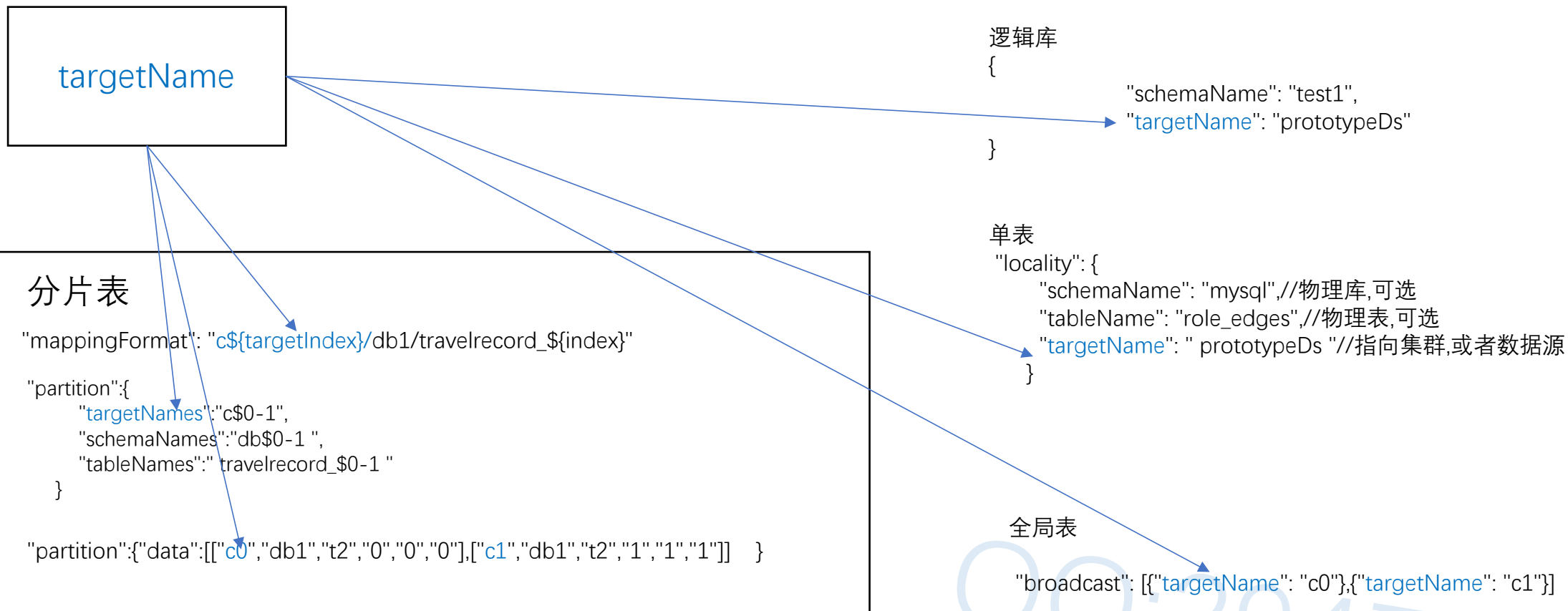


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# 数据源与集群(主备从)



# 数据源与逻辑表



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以下说明不区分集群或数据源,统一称为数据源

## Mycat2

```
//test1.schema.json
```

```
{  
  "schemaName": "test1",  
  "targetName": "prototypeDs"  
}
```

逻辑库: test1  
数据源: prototypeDs

---

## MySQL

物理库: test1  
URL:jdbc:mysql://localhost:3306/test1

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以下说明不区分集群或数据源,统一称为数据源

## Mycat2-单表

```
{  
  "schemaName": "test1 ",  
  "normalTables": {  
    "role_edges": {  
      "createTableSQL": null, // 可选  
      "locality": {  
        "schemaName": "mysql", // 物理库, 可选  
        "tableName": "role_edges", // 物理表, 可选  
        "targetName": "prototypeDs" // 指向集群, 或者数据源  
      }  
    }  
  }  
  .....  
}
```

逻辑库: test1  
逻辑表: role\_edges  
数据源: prototypeDs

---

## MySQL

物理库: mysql  
物理表: role\_edges  
URL: jdbc:mysql://localhost:3306/mysql

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以下说明不区分集群或数据源,统一称为数据源

## Mycat2-全局表

```
{  
  "schemaName": "test1",  
  "globalTables": {  
    "role_edges": {  
      "broadcast": [{"targetName": "c0"}, {"targetName": "c1"}]  
    }  
  }  
  .....  
}
```

逻辑库: test1  
逻辑表: role\_edges  
数据源: c0,c1

---

## MySQL

物理库: test1  
物理表: role\_edges  
URL:jdbc:mysql://localhost:3306/test1

物理库: test1  
物理表: role\_edges  
URL:jdbc:mysql://localhost:3307/test1

Mycat2在处理test1.role\_edges的insert/update语句会把SQL广播到3306,3307上面  
只查询test1.role\_edges表的时候,会随机选一个MySQL查询

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以下说明不区分集群或数据源,统一称为数据源

## Mycat2-分片表-分库分表下标

```
"shardingTables": {  
  "travelrecord": {  
    "function": {  
      "properties": {  
        "dbNum": "2",//分库数量  
        "tableNum": "2",//分表数量  
        "tableMethod": "hash(id)",//分表分片函数  
        "storeNum": 2,//实际存储节点数量  
        "dbMethod": "hash(id)",//分库分片函数  
        "mappingFormat":  
        "c${targetIndex}/db1_${dbIndex}/travelrecord_${tableIndex}"  
      }  
    }  
  }  
}
```

逻辑库: test1  
逻辑表: travelrecord  
数据源: c0,c1

MySQL

目标:c0  
物理库:db1\_0  
物理表:  
db1\_0. travelrecord\_0  
db1\_0. travelrecord\_1  
URL:jdbc:mysql://localhost:3306/db1\_0

目标:c1  
物理库:db1\_1  
物理表:  
db1\_1. travelrecord\_0  
db1\_1. travelrecord\_1  
URL:jdbc:mysql://localhost:3307/db1\_1

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以下说明不区分集群或数据源,统一称为数据源

## Mycat2-分片表-全局分区(分表)下标

```
"shardingTables": {  
  "travelrecord": {  
    "function": {  
      "properties": {  
        "dbNum": "2",//分库数量  
        "tableNum": "2",//分表数量  
        "tableMethod": "hash(id)",//分表分片函数  
        "storeNum": 2,//实际存储节点数量  
        "dbMethod": "hash(id)",//分库分片函数  
        "mappingFormat":  
        "c${targetIndex}/db1/travelrecord_${index}"  
      }  
    }  
  }  
}
```

逻辑库: test1  
逻辑表: travelrecord  
数据源: c0,c1

MySQL

目标:c0  
物理库:db1  
物理表:  
db1. travelrecord\_0  
db1. travelrecord\_1  
URL:jdbc:mysql://localhost:3306/db1

目标:c1  
物理库:db1  
物理表:  
db1. travelrecord\_2  
db1. travelrecord\_3  
URL:jdbc:mysql://localhost:3307/db1

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以下说明不区分集群或数据源,统一称为数据源

# Mycat2-分片表-分区枚举-多实例分库

```
"shardingTables": {  
  "travelrecord": {  
    "function": {  
      "clazz": "具体自定义分片算法"  
      "properties": {  
  
        ...分片算法参数  
      }  
    },  
    "partition": {  
      "targetNames": "c$0-1",  
      "schemaNames": "db1",  
      "tableNames": "travelrecord "  
    }  
  }  
}
```

```
for (String target : targets) {  
  for (String schema : schemas) {  
    for (String table : tables) {  
      ...生成存储节点  
    }  
  }  
}
```

逻辑库: test1  
逻辑表: travelrecord  
数据源: c0,c1

MySQL

目标:c0  
物理库:db1  
物理表:  
db1. travelrecord  
URL:jdbc:mysql://localhost:3306/db1

目标:c1  
物理库:db1  
物理表:  
db1. travelrecord  
URL:jdbc:mysql://localhost:3307/db1

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以下说明不区分集群或数据源,统一称为数据源

# Mycat2-分片表-分区枚举-单实例单库分表

```
"shardingTables": {  
  "travelrecord": {  
    "function": {  
      "clazz": "具体自定义分片算法"  
      "properties": {  
  
        ...分片算法参数  
      }  
    },  
    "partition": {  
      "targetNames": "c0",  
      "schemaNames": "db1",  
      "tableNames": "travelrecord_${0-1}"  
    }  
  }  
}
```

逻辑库: test1  
逻辑表: travelrecord  
数据源: c0

```
for (String target : targets) {  
  for (String schema : schemas) {  
    for (String table : tables) {  
      ...生成存储节点  
    }  
  }  
}
```

MySQL

目标:c0  
物理库:db1  
物理表:  
db1. travelrecord\_0  
db1. travelrecord\_1  
URL:jdbc:mysql://localhost:3306/db1

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以下说明不区分集群或数据源,统一称为数据源

# Mycat2-分片表-分区枚举-层次化分库分表(与分片算法结合)

```
"shardingTables": {  
  "travelrecord": {  
    "function": {  
      "clazz": "//具体自定义分片算法  
      "properties": {  
  
        ...分片算法参数  
      }  
    },  
    "partition": {  
      "targetNames": "c$0-1",  
      "schemaNames": "db$0-1 ",  
      "tableNames": " travelrecord_ $0-1 "  
    }  
  }  
}
```

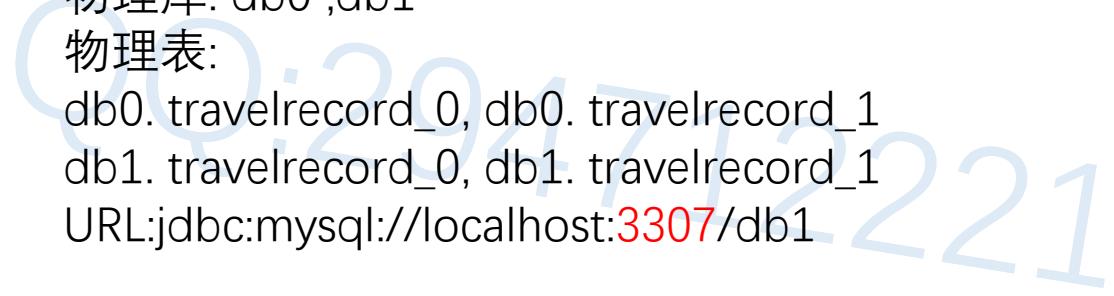
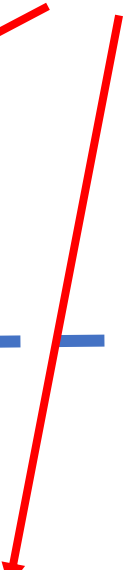
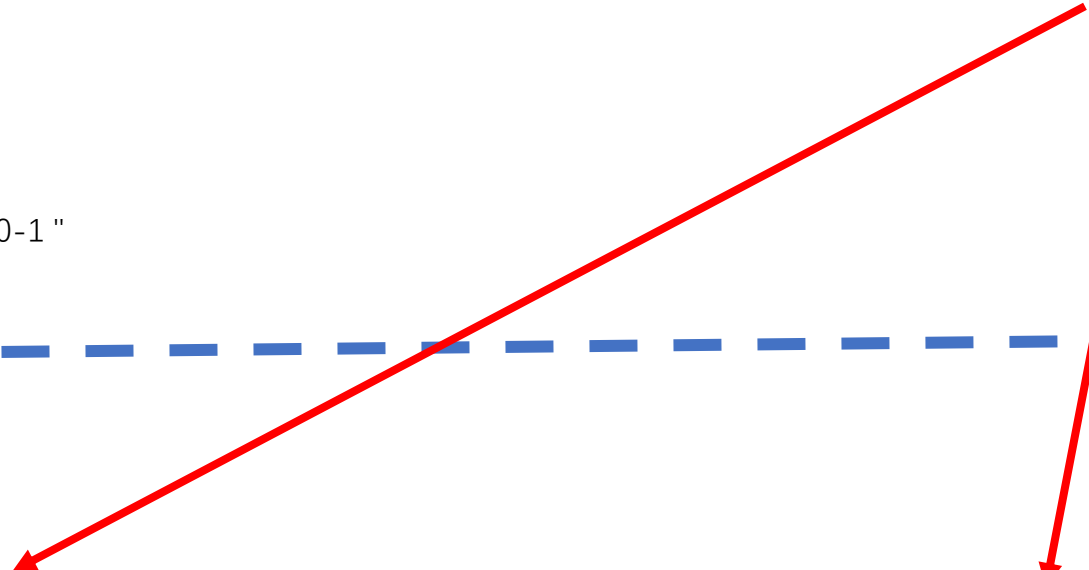
```
for (String target : targets) {  
  for (String schema : schemas) {  
    for (String table : tables) {  
      ...生成存储节点  
    }  
  }  
}
```

逻辑库: test1  
逻辑表: travelrecord  
数据源: c0,c1

MySQL

目标:c0  
物理库: db0,db1  
物理表:  
db0. travelrecord\_0, db0. travelrecord\_1  
db1. travelrecord\_0, db1. travelrecord\_1  
URL:jdbc:mysql://localhost:3306/db1

目标:c1  
物理库: db0 ,db1  
物理表:  
db0. travelrecord\_0, db0. travelrecord\_1  
db1. travelrecord\_0, db1. travelrecord\_1  
URL:jdbc:mysql://localhost:3307/db1



以下说明不区分集群或数据源,统一称为数据源

## Mycat2-分片表-自定义分区(结合分片算法)

```
"shardingTable":{  
  "createTableSQL":"...",  
  "function":{},  
  "partition":{  
    "data":[[["c0","db1","t2","0","0","0"],["c1","db1","t2","1","1","1"]]  }  
  }  
}
```

物理分库下标  
物理分表下标  
全局分区(分表)下标

逻辑库: test1  
逻辑表: travelrecord  
数据源: c0,c1

MySQL

目标:c0  
物理库: db1  
物理表:  
db1. t2  
URL:jdbc:mysql://localhost:3306/db1

目标:c1  
物理库: db1  
物理表:  
db1. t2  
URL:jdbc:mysql://localhost:3307/db1

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