环境

Centos7 , MariaDB 10.1以上版本

节点环境（建议至少三个节点）

192.168.57.128 db1

192.168.57.129 db2

192.168.57.130 db3

注意：centos7修改hostname方法

hostnamectl set-hostname db1

关闭防火墙

systemctl stop firewalld;

关闭SElinux

临时关闭

setenforce 0

永久关闭

vim /etc/selinux/config

将SELINUX=enforcing改为SELINUX=disabled

添加源(192.168.57.128，192.168.57.129，192.168.57.130)：

在/etc/yum.repos.d/下新建文件MariaDB.repo

**$ touch /etc/yum.repos.d/MariaDB.repo**

编辑文件MariaDB.repo

**$ vim /etc/yum.repos.d/MariaDB.repo**

加入内容

**[mariadb]**

name = MariaDB

baseurl = http://yum.mariadb.org/10.1/centos7-amd64

gpgkey=https://yum.mariadb.org/RPM-GPG-KEY-MariaDB

gpgcheck=1

退出编辑

**$ :wq**

安装MariaDB galera cluster (192.168.57.128，192.168.57.129，192.168.57.130)

注意：galera cluster在MariaDB 10.1中已经包含，所以不用安装，如果是以下版本需要运行命令

**$ yum install MariaDB-server MariaDB-client galera**

配置MariaDB galera cluster参数信息(192.168.57.128，192.168.57.129，192.168.57.130)

192.168.57.128配置（其他两个节点配置保持一致，只需要修改wsrep\_node\_name = db2,wsrep\_node\_address=192.168.57.129; wsrep\_node\_name = db3,wsrep\_node\_address=192.168.57.130;）

**$ vim /etc/my.cnf.d/server.cnf**

**[server]**

**[mysqld]**

**[galera]**

**wsrep\_causal\_reads=ON**

**wsrep\_provider\_options="gcache.size=4G"**

**wsrep\_certify\_nonPK=ON**

**query\_cache\_size=0**

**wsrep\_on=ON**

**wsrep\_provider=/usr/lib64/galera/libgalera\_smm.so**

**wsrep\_cluster\_name=MariaDBGaleraCluster**

**wsrep\_cluster\_address="gcomm://192.168.57.128,192.168.57.129,192.168.57.130"**

**wsrep\_node\_name=db1**

**wsrep\_node\_address=192.168.57.128**

**binlog\_format=row**

**default\_storage\_engine=InnoDB**

**innodb\_autoinc\_lock\_mode=2**

**wsrep\_slave\_threads=8**

**innodb\_flush\_log\_at\_trx\_commit=0**

**wsrep\_sst\_method=rsync**

**[embedded]**

**[mariadb]**

**[mariadb-10.1]**

启动节点，第一次第一个节点启动和其他节点有所区别要注意

第一个节点启动命令

**$ mysqld --user=mysql –wsrep-new-cluster &(官方)**

**或者**

**mysqld\_safe --user=mysql –wsrep-new-cluster &**

**或者**

**galera\_new\_cluster**

初始化第一个节点(其他几个节点可以不用执行这个命令，主要是设置root密码和其他的额外配置)

**$ mysql\_secure\_installation**

启动另外两个节点

**$ systemctl start mariadb**

查看集群的信息,如果value等于3（节点数）表示集群是成功的。

**$ mysql –uroot –p123456**

**MariaDB [(none)]> SHOW STATUS LIKE 'wsrep\_cluster\_size';**

**+--------------------+-------+**

**| Variable\_name | Value |**

**+--------------------+-------+**

**| wsrep\_cluster\_size | 3 |**

**+--------------------+-------+**

**1 row in set (0.04 sec)**

**MariaDB [(none)]> show global status like 'ws%';**

**+------------------------------+--------------------------------------+**

**| Variable\_name | Value |**

**+------------------------------+--------------------------------------+**

**| wsrep\_apply\_oooe | 0.000000 |**

**| wsrep\_apply\_oool | 0.000000 |**

**| wsrep\_apply\_window | 1.000000 |**

**| wsrep\_causal\_reads | 7 |**

**| wsrep\_cert\_deps\_distance | 1.000000 |**

**| wsrep\_cert\_index\_size | 3 |**

**| wsrep\_cert\_interval | 0.000000 |**

**| wsrep\_cluster\_conf\_id | 139 |**

**| wsrep\_cluster\_size | 1 |**

**| wsrep\_cluster\_state\_uuid | 70995100-2a79-11e7-b505-d2a88dbb0e87 |**

**| wsrep\_cluster\_status | Primary |**

**| wsrep\_commit\_oooe | 0.000000 |**

**| wsrep\_commit\_oool | 0.000000 |**

**| wsrep\_commit\_window | 1.000000 |**

**| wsrep\_connected | ON |**

**| wsrep\_desync\_count | 0 |**

**| wsrep\_evs\_delayed | |**

**| wsrep\_evs\_evict\_list | |**

**| wsrep\_evs\_repl\_latency | 0/0/0/0/0 |**

**| wsrep\_evs\_state | OPERATIONAL |**

**| wsrep\_flow\_control\_paused | 0.000000 |**

**| wsrep\_flow\_control\_paused\_ns | 0 |**

**| wsrep\_flow\_control\_recv | 0 |**

**| wsrep\_flow\_control\_sent | 0 |**

**| wsrep\_gcomm\_uuid | 7fa8d5bf-2a8f-11e7-ba46-f20dddc9f9ed |**

**| wsrep\_incoming\_addresses | 192.168.57.141:3306 |**

**| wsrep\_last\_committed | 11 |**

**| wsrep\_local\_bf\_aborts | 0 |**

**| wsrep\_local\_cached\_downto | 11 |**

**| wsrep\_local\_cert\_failures | 0 |**

**| wsrep\_local\_commits | 1 |**

**| wsrep\_local\_index | 0 |**

**| wsrep\_local\_recv\_queue | 0 |**

**| wsrep\_local\_recv\_queue\_avg | 0.000000 |**

**| wsrep\_local\_recv\_queue\_max | 1 |**

**| wsrep\_local\_recv\_queue\_min | 0 |**

**| wsrep\_local\_replays | 0 |**

**| wsrep\_local\_send\_queue | 0 |**

**| wsrep\_local\_send\_queue\_avg | 0.000000 |**

**| wsrep\_local\_send\_queue\_max | 1 |**

**| wsrep\_local\_send\_queue\_min | 0 |**

**| wsrep\_local\_state | 4 |**

**| wsrep\_local\_state\_comment | Synced |**

**| wsrep\_local\_state\_uuid | 70995100-2a79-11e7-b505-d2a88dbb0e87 |**

**| wsrep\_protocol\_version | 7 |**

**| wsrep\_provider\_name | Galera |**

**| wsrep\_provider\_vendor | Codership Oy <info@codership.com> |**

**| wsrep\_provider\_version | 25.3.19(r3667) |**

**| wsrep\_ready | ON |**

**| wsrep\_received | 7 |**

**| wsrep\_received\_bytes | 1371 |**

**| wsrep\_repl\_data\_bytes | 110 |**

**| wsrep\_repl\_keys | 3 |**

**| wsrep\_repl\_keys\_bytes | 47 |**

**| wsrep\_repl\_other\_bytes | 0 |**

**| wsrep\_replicated | 1 |**

**| wsrep\_replicated\_bytes | 221 |**

**| wsrep\_thread\_count | 9 |**

**+------------------------------+--------------------------------------+**

**58 rows in set (0.00 sec)**

注：

wsrep\_cluster\_status为Primary，表示节点为主节点，正常读写。

wsrep\_ready为ON，表示集群正常运行。

wsrep\_cluster\_size为3，表示集群有三个节点。

关闭MariaDB

**$ systemctl stop mariadb**

如果系统中没有systemctl命令

**$ /etc/init.d/mysql start**

外篇：修改密码

**$ mysql –uroot –p**

* **use mysql;**
* **update user set password = password(‘123456’) where user = ‘user’;**
* **\q**

MariaDB spider分库分片

安装spider，使MariaDB支持spider，使用yum安装的install\_spider.sql文件路径/usr/share/mysql/install\_spider.sql,使用源码安装此文件在storage/spider/scripts/install\_spider.sql

**$ mysql –uroot –p < /usr/share/mysql/install\_spider.sql**

查看spider是否已经存在

**mysql > SELECT engine, support, transactions, xa FROM information\_schema.engines;**

**+--------------------+---------+--------------+------+**

**| engine | support | transactions | xa |**

**+--------------------+---------+--------------+------+**

**| SPIDER | YES | YES | YES |**

**| MRG\_MyISAM | YES | NO | NO |**

**| CSV | YES | NO | NO |**

**| Aria | YES | NO | NO |**

**| MyISAM | YES | NO | NO |**

**| MEMORY | YES | NO | NO |**

**| InnoDB | DEFAULT | YES | YES |**

**| SEQUENCE | YES | YES | NO |**

**| PERFORMANCE\_SCHEMA | YES | NO | NO |**

**+--------------------+---------+--------------+------+**

cluster1，cluster2。。。的test库中创建表

**create table city(**

**id bigint(20) not null primary key,**

**code varchar(50),**

**name varchar(100)**

**)engine=InnoDB ;**

在spider1上创建分片规则

创建服务信息

**create server backend1 foreign data wrapper mysql options**

**(host '192.168.57.128', database 'test', user 'spider', password '123456', port 3306);**

**create server backend2 foreign data wrapper mysql options**

**(host '192.168.57.130', database 'test', user 'spider', password '123456', port 3306);**

创建连接规则（使用ID HASH,其他range：范围，list:列表）

**create table city (**

**id bigint(20) not null ,**

**code varchar(50),**

**name varchar(100),**

**primary key (id),**

**key (code)**

**) engine=spider CHARSET=utf8 COMMENT='wrapper "mysql", table "city"'**

**PARTITION BY HASH (id)**

**(**

**PARTITION pt1 COMMENT = 'srv "backend1"',**

**PARTITION pt2 COMMENT = 'srv "backend3"'**

**) ;**