Creating a multimaster MariaDB replica

This topic will cover the process to create a two node Maria DB cluster. The cluster will be configured to allow Soffid console to use either database node, which in turn will replicate data changes to the other one.

Node 1 action	Node 2 action
Create and setup a Maria DB in node 1.	
Configure Maria DB to generate binary log files. Add the following lines to /etc/mysql/my.cnf: *server-id = **1*** *log-bin* *binlog-format=row* *expire_logs_days = 15* *max_binlog_size = 1000M* *replicate-ignore-table = soffid.SC_SEQUENCE* *slave-skip-errors = 1032,1053,1062*	
Restart MariaDB: `service mysql restart`	
	Create and setup a Maria DB in node 2.
	Configure Maria DB to generate binary log files. Add the following lines to /etc/mysql/my.conf: *server-id = **2*** *log-bin* *binlog-format=row* *expire_logs_days = 15* *max_binlog_size = 1000M* *replicate-ignore-table = soffid.SC_SEQUENCE* *slave-skip-errors = 1032,1053,1062*

Node 1 action	Node 2 action
	Restart MariaDB: `service mysql restart`
Dump current database contents: *mysqldump soffid -u soffid -p >soffid.data*	Load current database contents *mysql -u soffid -p < soffid.data*
	Create a user for node 1 to fetch data from node 2. From mysql, execute: *grant replication slave on *.* to replication_user@ <NODE1-IP>* *set password for replication_user@1<NODE1-IP> = password('<NODE1-PASS>')*
Create a user for node 2 to fetch data from node 1. From mysql, execute: *grant replication slave on *.* to replication_user@ <NODE2-IP>* *set password for replication_user@1<NODE2-IP> = password('<NODE2-PASS>')*	
Query current binary log position: MariaDB [(none)]> *show master status*; The result should look like this:<table><tr><th>File</th><th>Position</th><th>Binlog_Do_DB</th><th>Binlog_Ign ore_DB</th></tr><tr><td>mysqld-bin.000030</td><td>68175</td><td></td><td></td></tr></table>The got values will be used on node 2 to start replica process.	

Node 1 action	Node 2 action

	Start replication from node 1 to node 2. From mysql, execute the following sentence, replacing proper values:
	    CHANGE MASTER TO
	    MASTER_HOST='<NODE1-IP>',
	    MASTER_USER='replication_user',
	    MASTER_PASSWORD='<NODE2-PASS>',
	    MASTER_PORT=3306,
	    *MASTER_LOG_FILE='<NODE1-FILE>' , /** i.e. mysql-bin.000030 **/*
	    *MASTER_LOG_POS=<NODE1-POSITION>, /** i.e. 68175 **/*
	    MASTER_CONNECT_RETRY=10;

	Verify replica is working right, by executing
	    SHOW SLAVE STATUS \G
	
	Check following lines:
	    Slave_IO_Running: Yes
	    Slave_SQL_Running: Yes
	    Seconds_Behind_Master: 0

	Query current binary log position: MariaDB [(none)]> *show master status;* The result should look like this: {table below} The got values will be used on node 1 to start replica process.

Now, start replication from node 2 to node 1. From mysql, execute the following sentence, replacing proper values:
    CHANGE MASTER TO
    MASTER_HOST='<NODE2-IP>',
    MASTER_USER='replication_user',
    MASTER_PASSWORD='<NODE1-PASS>',
    MASTER_PORT=3306,
    *MASTER_LOG_FILE='<NODE2-FILE>', /** i.e. mysql-bin.000060 **/*
    *MASTER_LOG_POS=<NODE2-POSITION>, /** i.e. 98325 **/*
    MASTER_CONNECT_RETRY=10;	

Table referenced in Node 2 action (Query current binary log position):

File	Position	Binlog_Do_DB	Binlog_Ignore_DB
mysqld-bin.000060	98325		

Node 1 action	Node 2 action

Verify replica is working right, by executing
 	
    SHOW SLAVE STATUS \G
 	
Check following lines:
    Slave_IO_Running: Yes
    Slave_SQL_Running: Yes
    Seconds_Behind_Master: 0	

Now, create and start SC_SEQUENCE table in node 1. This sequence will generate values 1, 11, 21, 31, 41, and so on:
    CREATE TABLE `SC_SEQUENCE` (
    `SEQ_NEXT` bigint(20) NOT NULL,
    `SEQ_CACHE` bigint(20) NOT NULL,
    `SEQ_INCREMENT` bigint(20) NOT NULL
    );
 	
    INSERT INTO SC_SEQUENCE VALUES (1, 100, 10);	

	Now, create and start SC_SEQUENCE table in node 2. This sequence will generate values 2, 12, 22, 32, 42, and so on::
	    CREATE TABLE `SC_SEQUENCE` (
	    `SEQ_NEXT` bigint(20) NOT NULL,
	    `SEQ_CACHE` bigint(20) NOT NULL,
	    `SEQ_INCREMENT` bigint(20) NOT NULL
	    );
	
	    INSERT INTO SC_SEQUENCE VALUES (2, 100, 10);

Now, configure the Console to use the following jdbc URL:

jdbc:mariadb:sequential://mariadb-host-1,mariadb-host-2/soffid