

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: <pre>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</pre>	
Restart MariaDB: <pre>service mysql restart</pre>	
	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.cnf: <pre>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</pre>

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	Restart MariaDB: <div style="border: 1px solid #ccc; padding: 5px; width: fit-content; margin-left: 20px;">service mysql restart</div>								
Dump current database contents: <i>mysqldump soffid -u soffid -p >soffid.data</i>	Load current database contents <i>mysql -u soffid -p < soffid.data</i>								
	Create a user for node 1 to fetch data from node 2. From mysql, execute: <i>grant replication slave on *.* to replication_user@<NODE1-IP></i> <i>set password for replication_user@1<NODE1-IP> = password('<NODE1-PASS>')</i>								
Create a user for node 2 to fetch data from node 1. From mysql, execute: <i>grant replication slave on *.* to replication_user@<NODE2-IP></i> <i>set password for replication_user@1<NODE2-IP> = password('<NODE2-PASS>')</i>									
Query current binary log position: MariaDB [(none)]> <i>show master status;</i> The result should look like this: <table border="1" data-bbox="172 1240 778 1442"> <thead> <tr> <th>File</th> <th>Position</th> <th>Binlog_Do_DB</th> <th>Binlog_Ignore_DB</th> </tr> </thead> <tbody> <tr> <td>mysqld-bin.000030</td> <td>68175</td> <td></td> <td></td> </tr> </tbody> </table> The got values will be used on node 2 to start replica process.	File	Position	Binlog_Do_DB	Binlog_Ignore_DB	mysqld-bin.000030	68175			
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mysqld-bin.000030	68175								

Node 1 action	Node 2 action								
	<p>Start replication from node 1 to node 2. From mysql, execute the following sentence, replacing proper values:</p> <pre>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;</pre>								
	<p>Verify replica is working right, by executing</p> <pre>SHOW SLAVE STATUS \G</pre> <p>Check following lines:</p> <pre>Slave_IO_Running: Yes Slave_SQL_Running: Yes Seconds_Behind_Master: 0</pre>								
	<p>Query current binary log position:</p> <pre>MariaDB [(none)]> show master status;</pre> <p>The result should look like this:</p> <table border="1" data-bbox="815 1182 1485 1346"> <thead> <tr> <th>File</th> <th>Position</th> <th>Binlog_Do_D B</th> <th>Binlog_Ignor e_DB</th> </tr> </thead> <tbody> <tr> <td>mysqld- bin.000060</td> <td>98325</td> <td></td> <td></td> </tr> </tbody> </table> <p>The got values will be used on node 1 to start replica process.</p>	File	Position	Binlog_Do_D B	Binlog_Ignor e_DB	mysqld- bin.000060	98325		
File	Position	Binlog_Do_D B	Binlog_Ignor e_DB						
mysqld- bin.000060	98325								
<p>Now, start replication from node 2 to node 1. From mysql, execute the following sentence, replacing proper values:</p> <pre>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;</pre>									

Node 1 action	Node 2 action
<p>Verify replica is working right, by executing <i>SHOW SLAVE STATUS \G</i></p> <p>Check following lines: Slave_IO_Running: Yes Slave_SQL_Running: Yes Seconds_Behind_Master: 0</p>	
<p>Now, create and start SC_SEQUENCE table in node 1. This sequence will generate values 1, 11, 21, 31, 41, and so on:</p> <pre><i>CREATE TABLE `SC_SEQUENCE` (`SEQ_NEXT` bigint(20) NOT NULL, `SEQ_CACHE` bigint(20) NOT NULL, `SEQ_INCREMENT` bigint(20) NOT NULL);</i></pre> <pre><i>INSERT INTO SC_SEQUENCE VALUES (1, 100, 10);</i></pre>	
	<p>Now, create and start SC_SEQUENCE table in node 2. This sequence will generate values 2, 12, 22, 32, 42, and so on::</p> <pre><i>CREATE TABLE `SC_SEQUENCE` (`SEQ_NEXT` bigint(20) NOT NULL, `SEQ_CACHE` bigint(20) NOT NULL, `SEQ_INCREMENT` bigint(20) NOT NULL);</i></pre> <pre><i>INSERT INTO SC_SEQUENCE VALUES (2, 100, 10);</i></pre>

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

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

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