

# TED Replication by Galera Installation in lab Report #5

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Steps taken in lab

## 1- System Configuration

CentOS Linux release 7.3.1611 (Core)

3.10.0-514.6.1.el7.x86\_64

Server version: 10.0.29-MariaDB-wsrep MariaDB Server,  
wsrep\_25.16.rc3fc46e

## 2- Configuring steps

### 2.1 repository configuration

/etc/yum.repos.d/MariaDB.repo

```
# MariaDB 10.0 CentOS repository list - created 2017-02-21 11:36 UTC #  
http://downloads.mariadb.org/mariadb/repositories/ [mariadb] name = MariaDB  
baseurl = http://yum.mariadb.org/10.0/centos7-amd64  
gpgkey=https://yum.mariadb.org/RPM-GPG-KEY-MariaDB gpgcheck=1
```

Refrence:

[https://downloads.mariadb.org/mariadb/repositories/#mirror=fe\\_up\\_pt&distro=CentOS&distro\\_release=centos7-amd64--centos7&version=10.0](https://downloads.mariadb.org/mariadb/repositories/#mirror=fe_up_pt&distro=CentOS&distro_release=centos7-amd64--centos7&version=10.0)

### 2.2 Firewall Configuration

I tried all of these, even disabling firewall but it didn't work

```
firewall-cmd --zone=dmz --add-port=3306/tcp --permanent  
firewall-cmd --zone=dmz --add-port=4444/tcp --permanent  
firewall-cmd --zone=dmz --add-port=4567/tcp --permanent  
firewall-cmd --zone=dmz --add-port=4568/tcp --permanent  
sudo firewall-cmd --permanent --add-service=mysql
```

```
firewall-cmd --reload
```

Only solution is: **service firewalld stop**



### **2.3 Installation of dependency**

Socat and nano editor  
Sudo yum install socat

### **2.4 Naming the hosts**

Sudo nano /etc/hosts  
10.30.2.46 db46  
10.30.2.47 b47

### **2.5 Installation of mariadb galera server client, rsync**

sudo yum install MariaDB-Galera-server MariaDB-client rsync galera

### **2.6 Mysql secure installation**

```
sudo service mysql start  
sudo /usr/bin/mysql_secure_installation  
mysql -u root -p  
mysql> DELETE FROM mysql.user WHERE user="";  
mysql> GRANT ALL ON *.* TO 'root'@'%' IDENTIFIED BY '123456';  
mysql> GRANT USAGE ON *.* to sst_user@'%' IDENTIFIED BY '123456';  
mysql> GRANT ALL PRIVILEGES on *.* to sst_user@'%';  
mysql> FLUSH PRIVILEGES;  
mysql> quit
```



## 2.7 Create the MariaDB Galera Cluster config

```
sudo nano /etc/my.cnf.d/server.cnf
```

### **db46:**

```
binlog_format=ROW
default-storage-engine=innodb
innodb_autoinc_lock_mode=2
innodb_locks_unsafe_for_binlog=1
query_cache_size=0
query_cache_type=0
bind-address=0.0.0.0
```

```
datadir=/var/lib/mysql
innodb_log_file_size=100M
innodb_file_per_table
innodb_flush_log_at_trx_commit=2
```

```
wsrep_provider=/usr/lib64/galera/libgalera_smm.so
wsrep_cluster_address="gcomm://10.30.2.46, 10.30.2.47"
wsrep_cluster_name='galera_cluster'
wsrep_node_address='10.30.2.46'
wsrep_node_name='db46'
wsrep_sst_method=rsync
wsrep_sst_auth=sst_user:123456
```

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### **db47:**

```
binlog_format=ROW
default-storage-engine=innodb
```

```
innodb_autoinc_lock_mode=2
innodb_locks_unsafe_for_binlog=1
query_cache_size=0
query_cache_type=0
bind-address=0.0.0.0

datadir=/var/lib/mysql
innodb_log_file_size=100M
innodb_file_per_table
innodb_flush_log_at_trx_commit=2

wsrep_provider=/usr/lib64/galera/libgalera_smm.so
wsrep_cluster_address="gcomm://10.30.2.46, 10.30.2.47"
wsrep_cluster_name='galera_cluster'
wsrep_node_address='10.30.2.47'
wsrep_node_name='db47'
wsrep_sst_method=rsync
wsrep_sst_auth=sst_user:123456
```

## 2.8 Start the cluster

```
sudo /etc/init.d/mysql start --wsrep-new-cluster      (Primary node)
sudo /etc/init.d/mysql start                          (other nodes)
```



```

wsrep_received | 3
wsrep_received_bytes | 212
wsrep_local_commits | 0
wsrep_local_cert_failures | 0
wsrep_local_replays | 0
wsrep_local_send_queue | 0
wsrep_local_send_queue_max | 1
wsrep_local_send_queue_min | 0
wsrep_local_send_queue_avg | 0.000000
wsrep_local_recv_queue | 0
wsrep_local_recv_queue_max | 1
wsrep_local_recv_queue_min | 0
wsrep_local_recv_queue_avg | 0.000000
wsrep_local_cached_downto | 18446744073709551615
wsrep_flow_control_paused_ns | 0
wsrep_flow_control_paused | 0.000000
wsrep_flow_control_sent | 0
wsrep_flow_control_recv | 0
wsrep_cert_deps_distance | 0.000000
wsrep_apply_oooe | 0.000000
wsrep_apply_ool | 0.000000
wsrep_apply_window | 0.000000
wsrep_commit_oooe | 0.000000
wsrep_commit_ool | 0.000000
wsrep_commit_window | 0.000000
wsrep_local_state | 4
wsrep_local_state_comment | Synced
wsrep_cert_index_size | 0
wsrep_causal_reads | 0
wsrep_cert_interval | 0.000000
wsrep_incoming_addresses | 10.30.2.47:3306,10.30.2.46:3306
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_gcomm_uuid | 458662d4-f854-11e6-9e7e-5b8c299b066b
wsrep_cluster_conf_id | 2
wsrep_cluster_size | 2
wsrep_cluster_state_uuid | adc28eb4-f841-11e6-b170-f624f1d08d70
wsrep_cluster_status | Primary
wsrep_connected | ON
wsrep_local_bf_aborts | 0
wsrep_local_index | 0
wsrep_provider_name | Galera
wsrep_provider_vendor | Codership Oy <info@codership.com>
wsrep_provider_version | 25.3.19 (r3667)
wsrep_ready | ON
wsrep_thread_count | 2

```



And the test is OK

```
MariaDB [(none)]> create database Domain_1;  
Query OK, 1 row affected (0.03 sec)
```

```
MariaDB [(none)]> use Domain_1  
Database changed
```

```
MariaDB [Domain_1]> create table test (LSPPSCis int (3) unsigned primary key not null;  
Query OK, 0 rows affected (0.13 sec)
```

```
MariaDB [Domain_1]> set profiling = 1;  
Query OK, 0 rows affected (0.00 sec)
```

```
MariaDB [Domain_1]> insert into test (LSPPSCis,Addr) values ('2','1.1.1.2');  
ERROR 1054 (42S22): Unknown column 'LSPPSCis' in 'field list'  
MariaDB [Domain_1]> insert into test (LSPPSCis,Addr) values ('2','1.1.1.2');  
Query OK, 1 row affected (0.00 sec)
```

```
MariaDB [Domain_1]> show profiles;
```

Query_ID	Duration	Query
1	0.00121691	insert into test (LSPPSCis,Addr) values ('2','1.1.1.2')
2	0.00284338	insert into test (LSPPSCis,Addr) values ('2','1.1.1.2')

2 rows in set (0.00 sec)

```
MariaDB [Domain_1]>
```

maziar@ada:~

```
+-----+  
| Database |  
+-----+  
| Domain_1 |  
| information_schema |  
| mysql |  
| performance_schema |  
+-----+  
4 rows in set (0.00 sec)
```

```
MariaDB [(none)]> use Domain_1  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A
```

```
Database changed
```

```
MariaDB [Domain_1]> select * from test;
```

LSPPSCis	Addr
2	1.1.1.2

1 row in set (0.00 sec)

```
MariaDB [Domain_1]>
```

