

Защита лабораторной работы № 6

Установка и настройка системы управления базами данных MariaDB

Администрирование сетевых подсистем

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Цель работы

Приобретение практических навыков по установке и конфигурированию системы управления базами данных на примере программного обеспечения MariaDB.

```
[saismael@server.saismael.net ~]$ sudo -i  
[sudo] password for saismael:  
[root@server.saismael.net ~]# dnf -y install mariadb mariadb-server
```

```
Verifying      : mariadb-server-3:10.5.16-2.el9_0.x86_64      6/1  
Verifying      : mariadb-gssapi-server-3:10.5.16-2.el9_0.x86_64 7/1  
Verifying      : mariadb-errmsg-3:10.5.16-2.el9_0.x86_64      8/1  
Verifying      : mariadb-common-3:10.5.16-2.el9_0.x86_64     9/1  
Verifying      : mariadb-backup-3:10.5.16-2.el9_0.x86_64     10/1  
Verifying      : mariadb-3:10.5.16-2.el9_0.x86_64            11/1  
Verifying      : perl-DBD-MariaDB-1.21-16.el9_0.x86_64        12/1  
  
Installed:  
mariadb-3:10.5.16-2.el9_0.x86_64  
mariadb-backup-3:10.5.16-2.el9_0.x86_64  
mariadb-common-3:10.5.16-2.el9_0.x86_64  
mariadb-connector-c-3.2.6-1.el9_0.x86_64  
mariadb-connector-c-config-3.2.6-1.el9_0.noarch  
mariadb-errmsg-3:10.5.16-2.el9_0.x86_64  
mariadb-gssapi-server-3:10.5.16-2.el9_0.x86_64  
mariadb-server-3:10.5.16-2.el9_0.x86_64  
mariadb-server-utils-3:10.5.16-2.el9_0.x86_64  
mysql-selinux-1.0.5-1.el9_0.noarch  
perl-DBD-MariaDB-1.21-16.el9_0.x86_64  
perl-Sys-Hostname-1.23-479.el9.x86_64  
  
complete!
```

Конфигурация кодировки символов

```
[root@server.saismael.net ~]# cd /etc/my.cnf.d
[root@server.saismael.net my.cnf.d]# touch utf8.cnf
[root@server.saismael.net my.cnf.d]#
[root@server.saismael.net my.cnf.d]# systemctl restart mariadb
[root@server.saismael.net my.cnf.d]#
[root@server.saismael.net my.cnf.d]# mysql -u root -p
```

Enter password:

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 3

Server version: 10.5.16-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab

Type 'help;' or '\h' for help. Type '\c' to clear the cur

MariaDB [(none)]> status

mysql Ver 15.1 Distrib 10.5.16-MariaDB, for Linux (x86_64) using EditLine wrapper

```
Connection id:          3
Current database:
Current user:           root@localhost
SSL:                    Not in use
Current pager:          stdout
Using outfile:          ''
Using delimiter:        ;
Server:                 MariaDB
Server version:         10.5.16-MariaDB MariaDB Server
Protocol version:       10
Connection:             Localhost via UNIX socket
Server characterset:    utf8
Db      characterset:    utf8
Client characterset:    utf8
Conn.  characterset:    utf8
UNIX socket:            /var/lib/mysql/mysql.sock
Uptime:                 46 sec
```

Threads: 1 Questions: 4 Slow queries: 0 Opens: 17 Open tables: 10 Queries p

Создание базы данных

```
MariaDB [(none)]> CREATE DATABASE addressbook CHARACTER SET utf8 COLLATE utf8_general_ci;  
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [(none)]> USE addressbook;  
Database changed  
MariaDB [addressbook]> SHOW TABLES;  
Empty set (0.001 sec)
```

```
MariaDB [addressbook]> CREATE TABLE city(name VARCHAR(40), city VARCHAR(40));  
Query OK, 0 rows affected (0.105 sec)
```

```
MariaDB [addressbook]> INSERT INTO city(name,city) VALUES ('Ivanov','Moscow');  
Query OK, 1 row affected (0.006 sec)
```

```
MariaDB [addressbook]> INSERT INTO city(name,city) VALUES ('Petrov','Sochi');  
Query OK, 1 row affected (0.018 sec)
```

```
MariaDB [addressbook]> INSERT INTO city(name,city) VALUES ('Sidorov','Dubna');  
Query OK, 1 row affected (0.020 sec)
```

```
MariaDB [addressbook]> SELECT * FROM city;
```

```
+-----+-----+  
| name  | city  |  
+-----+-----+  
| Ivanov | Moscow |  
| Petrov | Sochi  |  
| Sidorov | Dubna  |  
+-----+-----+  
3 rows in set (0.001 sec)
```

```
MariaDB [addressbook]> CREATE USER saismael@'%' IDENTIFIED BY 'password';  
Query OK, 0 rows affected (0.018 sec)
```

```
MariaDB [addressbook]> GRANT SELECT,INSERT,UPDATE,DELETE ON addressbook.* TO saismael@'%';  
Query OK, 0 rows affected (0.003 sec)
```

```
MariaDB [addressbook]> FLUSH PRIVILEGES;  
Query OK, 0 rows affected (0.001 sec)
```

```
MariaDB [addressbook]> DESCRIBE city;
```

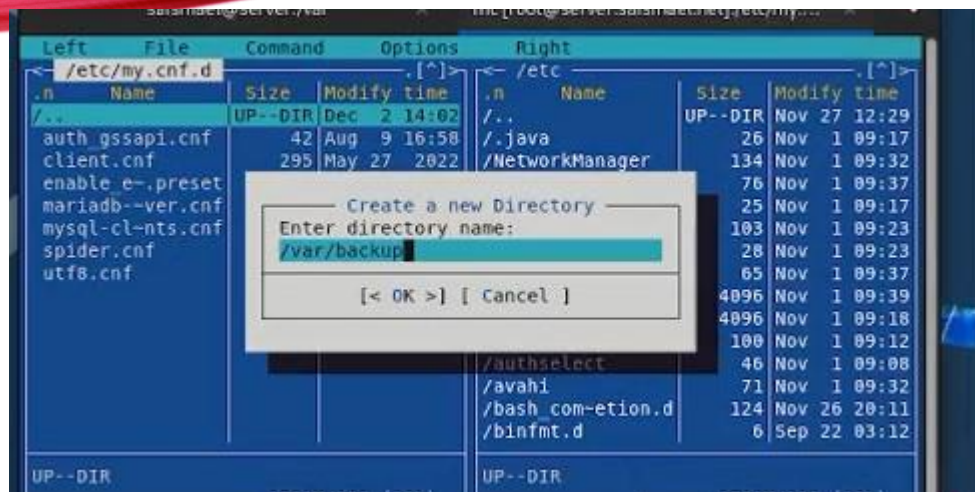
Field	Type	Null	Key	Default	Extra
name	varchar(40)	YES		NULL	
city	varchar(40)	YES		NULL	

```
2 rows in set (0.002 sec)
```

```
MariaDB [addressbook]> quit
```

Bye

Резервные копии



```
[root@server.saismael.net my.cnf.d]# mysqldump -u root -p addressbook > /var/backup/addressbook.sql
```

Enter password:

```
[root@server.saismael.net my.cnf.d]# mysqldump -u root -p addressbook | gzip > /var/backup/addressbook.sql.gz
```

Enter password:

```
[root@server.saismael.net my.cnf.d]# mysqldump -u root -p addressbook | gzip > $(date +%Y%m%d.%H%M%S).sql.gz
```

Enter password:

```
[root@server.saismael.net my.cnf.d]# mysql -u root -p addressbook < /var/backup/addressbook.sql
```

Enter password:

```
[root@server.saismael.net my.cnf.d]# zcat /var/backup/addressbook.sql.gz | mysql -u root -p addressbook
```

Enter password:

```
mysql.sh [-M--] 0 L:[ 1+14 15/ 40] *(305 / 708b) 0101 0x065
#!/bin/bash

echo "Provisioning script $0"

systemctl restart named

echo "Install needed packages"
dnf -y install mariadb mariadb-server

echo "Copy configuration files"
cp -R /vagrant/provision/server/mysql/etc/* /etc
mkdir -p /var/backup
cp -R /vagrant/provision/server/mysql/var/backup/* /var/backup

echo "Start mysql service"
systemctl enable mariadb
systemctl start mariadb

if [[ ! -d /var/lib/mysql/mysql ]]
then
echo "Securing mariadb"
mysql_secure_installation <<EOF
1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn
```

внутреннего окружения виртуальной машины

```
r.saismael.net my.cnf.d]# cd /vagrant/provision/server
r.saismael.net server]# mkdir -p /vagrant/provision/server/mysql/etc/
r.saismael.net server]# mkdir -p /vagrant/provision/server/mysql/var/
r.saismael.net server]# cp -R /etc/my.cnf.d/utf8.cnf /vagrant/provisi
mysql/etc/my.cnf.d/
r.saismael.net server]# cp -R /var/backup/* /vagrant/provision/server
backup/
```


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