

ОТЧЕТ ЛАБОРАТОРНОЙ РАБОТЫ 6

ДИСЦИПЛИНА

АДМИНИСТРИРОВАНИЕ СЕТЕВЫХ ПОДСИСТЕМ



ЦЕЛЬ РАБОТЫ

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



```
.user.net ~]$ sudo -i
takhovand:
~]$ dnf -y install mariadb mariadb-server
dnf check: 2:11:46 ago on Mon 17 Nov 2025 09:44:16 PM UTC.
===== Repository =====
Architecture Version
x86_64 3:10.5.29-2.el9_6
x86_64 3:10.5.29-2.el9_6
x86_64 3:10.5.29-2.el9_6
x86_64 1-0.14-1.el9_6
x86_64 1.21-16.el9_0
x86_64 1.23-481.1.el9_6
x86_64 3:10.5.29-2.el9_6
x86_64 3:10.5.29-2.el9_6
x86_64 3:10.5.29-2.el9_6
Repository: appstream
appstream
appstream
appstream
appstream
appstream
appstream
appstream
```

```
aDB [addressbook]> quit
t@localhost.user.net my.cnf.d]$ mysqlshow -u root -p
r password:
Databases
+-----+
addressbook
formation_schema
sql
rformance_schema
+-----+
t@localhost.user.net my.cnf.d]$ mysqlshow -u root -p addressbook
r password:
base: addressbook
+-----+
bles |
+-----+
ty |
+-----+
t@localhost.user.net my.cnf.d]$
```

```
type: "shell",
preserve_order: true,
path: "provision/serve

.provision "server http",
type: "shell",
preserve_order: true,
path: "provision/serve

.provision "server mysql",
type: "shell",
preserve_order: true,
path: "provision/serve

configuration
```

УСТАНОВКА MARIADB



```
Remove anonymous users? [Y/n] Y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] Y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] Y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] Y
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
[root@localhost.user.net etc]#
```


```
Running scriptlet: kea-2.6.4-1.el9.x86_64
Verifying      : kea-2.6.4-1.el9.x86_64
Verifying      : kea-libs-2.6.4-1.el9.x86_64
Verifying      : log4cplus-2.0.5-15.el9.x86_64
Verifying      : mariadb-connector-c-3.2.6-1.el9_0.x86_64
Verifying      : postgresql-private-libs-13.22-1.el9_6.x86_64
Verifying      : mariadb-connector-c-config-3.2.6-1.el9_0.noarch
```

```
stalled:
kea-2.6.4-1.el9.x86_64
kea-libs-2.6.4-1.el9.x86_64
log4cplus-2.0.5-15.el9.x86_64
mariadb-connector-c-3.2.6-1.el9_0.x86_64
mariadb-connector-c-config-3.2.6-1.el9_0.noarch
postgresql-private-libs-13.22-1.el9_6.x86_64
```

complete!

```
root@localhost:~
x86_64 2:1-117.el9_6      appst
ee-libs
x86_64 1.22.12-4.el9_6    appst
x86_64 5.14.0-570.58.1.el9_6 based
x86_64 5.14.0-570.58.1.el9_6 based
x86_64 5.14.0-570.58.1.el9_6 based
x86_64 1.6.3-1.el9        based
x86_64 1.1.0-2.el9_6.1    based
x86_64 1.4.2-2.el9        appst
x86_64 0.1.1-1.el9        appst
x86_64 2.22.0-1.el9       appst
x86_64 0^20250217.gale48a0-13.el9_6 appst
noarch 0^20250217.gale48a0-13.el9_6 appst
noarch 0.9.6-25.el9       based
Summary
=====
packages
packages
size: 1.4 G
N]:
```

КОНФИГУРАЦИЯ КОДИРОВКИ СИМВОЛОВ



```
root@localhost:/etc
GNU nano 5.6.1
[client]
default-character-set = utf8
[mysqld]
character-set-server = utf8
```

```
For server side help, type 'help contents'
MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
+-----+
3 rows in set (0.001 sec)
MariaDB [(none)]>
```

```
[root@localhost.user.net etc]# systemctl start mariadb
[root@localhost.user.net etc]# systemctl enable mariadb
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /usr/lib/systemd/system/mariadb.service.
[root@localhost.user.net etc]# ss -tulpen | grep mysql
```

СОЗДАНИЕ БАЗЫ ДАННЫХ



```
MariaDB [addressbook]> SELECT * FROM city;
+-----+-----+
| name | city |
+-----+-----+
| Иванов | Москва |
| о Петров | Сочи |
| Сидоров | Дубна |
+-----+-----+
3 rows in set (0.001 sec)

MariaDB [addressbook]> CREATE USER astakhovamd@'%' IDENTIFIED BY 'password';
Query OK, 0 rows affected (0.007 sec)

MariaDB [addressbook]> GRANT SELECT,INSERT,UPDATE,DELETE ON addressbook.* TO astakhovamd@'%';
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 (0.001 sec)

MariaDB [addressbook]> quit
```

```
)]]> USE addressbook;
ed
ssbook]> SHOW TABLES;
00 sec)

ssbook]> CREATE TABLE city(name VARCHAR(40), city VARCHAR(40));
Tables affected (0.006 sec)

ssbook]> CREATE TABLE city(name VARCHAR(40), city VARCHAR(40));
Tables affected (0.001 sec): Table 'city' already exists

ssbook]> INSERT INTO city(name,city) VALUES ('Иванов','Москва');
Rows affected (0.003 sec)

ssbook]> INSERT INTO city(name,city) VALUES ('о Петров','Сочи');
Rows affected (0.006 sec)

ssbook]> INSERT INTO city(name,city) VALUES ('Сидоров','Дубна');
Rows affected (0.007 sec)

ssbook]> SELECT * FROM city;
+-----+-----+
| name | city |
+-----+-----+
| Иванов | Москва |
| о Петров | Сочи |
| Сидоров | Дубна |
+-----+-----+
3 rows in set (0.001 sec)
```

РЕЗЕРВНЫЕ КОПИИ

```
root@localhost:etc x root@localhost:/etc/my.cnf.d x root@localhost:~ x
[astakhovamd@localhost.user.net ~]$ sudo -i
[sudo] password for astakhovamd:
[root@localhost.user.net ~]# mkdir -p /var/backup
[root@localhost.user.net ~]# mysqldump -u root -p addressbook > /var/backup/addressbook.sql
Enter password:
[root@localhost.user.net ~]# mysqldump -u root -p addressbook | gzip > /var/backup/addressbook.sql.gz
Enter password:
[root@localhost.user.net ~]# mysqldump -u root -p addressbook | gzip > $(date +%Y%m%d.%H%M%S).sql.gz
Enter password:
[root@localhost.user.net ~]# mysql -u root -p addressbook < /var/backup/addressbook.sql
Enter password:
[root@localhost.user.net ~]# zcat /var/backup/addressbook.sql.gz | mysql -u root -p addressbook
Enter password:
[root@localhost.user.net ~]#
```



```
root@localhost:/vagrant/provision/server
root@localhost:/etc
root@localhost:/etc/my.cnf.d
root@localhost:/vagrant/

GNU nano 5.6.1 mysql.sh
#!/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
y
123456
123456
y
y
y
y
EOF
echo "Create database"
mysql -u root -p123456 <<EOF
CREATE DATABASE addressbook CHARACTER SET utf8 COLLATE utf8_general_ci;
EOF
mysql -u root -p123456 addressbook < /var/backup/addressbook.sql
fi
```

```
type: "shell",
preserve_order: true,
path: "provision/server/dhcp.sh"

end

server.vm.provision "server http",
type: "shell",
preserve_order: true,
path: "provision/server/http.sh"

end

server.vm.provision "server mysql",
type: "shell",
preserve_order: true,
path: "provision/server/mysql.sh"

end|

## Client configuration
```

ВНЕСЕНИЕ ИЗМЕНЕНИЙ В НАСТРОЙКИ ВНУТРЕННЕГО ОКРУЖЕНИЯ ВИРТУАЛЬНОЙ МАШИНЫ



СПАСИБО ЗА ВНИМАНИЕ!

