

# configure jump server to use SSL for MySQL server 5.7 version

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## How to configure Ezeelogin to use SSL for MySQL database connections on ubuntu ?

**Overview:** This article provides step-by-step instructions to configure Ezeelogin to use SSL for MySQL database connections on Ubuntu, ensuring secure communication between the Ezeelogin jump server and the MySQL server.

### Mysql - SSL setup on Ubuntu Mysql server

#### Step 1. Check the Current SSL/TLS Status

Log into MySQL session

```
root@gateway:~# mysql -u root -p -h 127.0.0.1
```

Show the state of the SSL/TLS variables by typing:

```
mysql> SHOW VARIABLES LIKE '%ssl%';
```

Output

```
+-----+-----+
| Variable_name | Value |
+-----+-----+
| have_openssl | DISABLED |
| have_ssl | DISABLED |
| ssl_ca | |
| ssl_capath | |
| ssl_cert | |
| ssl_cipher | |
| ssl_crl | |
| ssl_crlpath | |
| ssl_key | |
+-----+-----+
9 rows in set (0.01 sec)
```

The **have\_openssl** and **have\_ssl variables** are both marked as DISABLED. This means that SSL functionality has been compiled into the server, but that it is not yet enabled.

## Step 2. Generate SSL/TLS Certificates and Keys

**To enable SSL connections to MySQL, first we need to generate the appropriate certificate and key files**

We can use the following command to generate the necessary files.

The files will be created in MySQL's data directory, located at `/var/lib/mysql`

```
root@gateway:~# mysql_ssl_rsa_setup --uid=mysql
```

Check the generated files by typing:

```
root@gateway:~# find /var/lib/mysql -name '*.pem' -ls
```

output

```
256740 4 -rw-r--r-- 1 mysql mysql 1078 Mar 17 17:24 /var/lib/mysql/server-cert.pem
256735 4 -rw----- 1 mysql mysql 1675 Mar 17 17:24 /var/lib/mysql/ca-key.pem<^>
256739 4 -rw-r--r-- 1 mysql mysql 451 Mar 17 17:24 /var/lib/mysql/public_key.pem<^>
256741 4 -rw----- 1 mysql mysql 1679 Mar 17 17:24 /var/lib/mysql/client-key.pem<^>
256737 4 -rw-r--r-- 1 mysql mysql 1074 Mar 17 17:24 /var/lib/mysql/ca.pem<^>
256743 4 -rw-r--r-- 1 mysql mysql 1078 Mar 17 17:24 /var/lib/mysql/client-cert.pem<^>
256736 4 -rw----- 1 mysql mysql 1675 Mar 17 17:24 /var/lib/mysql/private_key.pem<^>
256738 4 -rw----- 1 mysql mysql 1675 Mar 17 17:24 /var/lib/mysql/server-key.pem<^>
```

Enable SSL Connections on the MySQL Server

Restart the MySQL service

```
root@gateway:~# systemctl restart mysql
```

After restarting, open up a new MySQL session using the same command as before.

```
root@gateway:~# mysql -u root -p -h 127.0.0.1
```

Check the state of the SSL/TLS variables by typing:

```
mysql> SHOW VARIABLES LIKE '%ssl%';
```

Output

```
+-----+-----+
| Variable_name | Value |
+-----+-----+
| have_openssl | YES |
| have_ssl | YES |
| ssl_ca | Ca.pem |
| ssl_capath | |
| ssl_cert | server-cert.pem |
| ssl_cipher | |
| ssl_crl | |
| ssl_crlpath | |
| ssl_key | server-key.pem |
+-----+-----+
9 rows in set (0.01 sec)
```

The **have\_openssl** and **have\_ssl** variables read "YES" instead of "DISABLED" this time.

Check the connection details by the following command:

```
root@gateway:~# mysql -u ezlogin_database_username -p -h hostname or ip --ssl-  
ca=/var/lib/mysql/ca.pem --ssl-cert=/var/lib/mysql/client-cert.pem --ssl-key=/var/lib/mysql/client-  
key.pem
```

**example :**

```
root@gateway:~# mysql -u ezlogin_xxxx -p -h 10.11.1.11 --ssl-ca=/var/lib/mysql/ca.pem --ssl-  
cert=/var/lib/mysql/client-cert.pem --ssl-key=/var/lib/mysql/client-key.pem
```

In Case the certificate verification has been failed, refer [SSL certificate failed with MYSQL SSL](#)

```
mysql> s
```

```
-----
```

```
...
```

```
SSL: Cipher in use is DHE-RSA-AES256-SHA
```

```
...
```

```
Connection: 127.0.0.1 via TCP/IP
```

```
...
```

```
-----
```

SSL cipher is displayed, indicating that SSL is being used to secure our connection.

### Step 3. Configure ezeelogin jump server to use SSL for Mysql

Add `mysql_ssl_key,mysql_ssl_cert,mysql_ssl_ca` to **`/usr/local/etc/ezlogin/ez.conf`**

Edit the **`/usr/local/etc/ezlogin/ez.conf`** file add the following

```
root@gateway:~# vi /usr/local/etc/ezlogin/ez.conf
```

```
#Add the following
```

```
system_folder /var/www/ezlogin/  
force_https no  
uri_path /ezlogin/  
db_host 10.10.1.11  
db_port 3306  
db_name ezlogin_qzms  
db_user ezlogin_edcjwz  
db_pass dsH)$s5xAE[QgFms  
db_prefix aqvo_  
cookie_encryption_key ASvs8^pnu^^X9  
cookie_name lcrfs  
cookie_path /ezlogin/  
www_folder /var/www/html/ezlogin/  
admin_user admin  
mysql_encrypt yes  
mysql_ssl_key /var/lib/mysql/client-key.pem  
mysql_ssl_cert /var/lib/mysql/client-cert.pem  
mysql_ssl_ca /var/lib/mysql/ca.pem  
mysql_ssl_capath /var/lib/mysql  
mysql_ssl_verify no
```

**Note:** Make sure that you have changed `db_port` to 3306 & `db_host` to the IP Address of your host

**Step 4.** Change the bind-address & allow the Ezeelogin jump server user to access the database.

Edit the `/etc/mysql/mysql.conf.d/mysqld.cnf` & change bind-address

```
root@gateway:~# vi /etc/mysql/mysql.conf.d/mysqld.cnf
```

Change bind-address to host ip(server ip)or 0.0.0.0

```
bind-address x.x.x.x (Host ip or 0.0.0.0)
```

Restart the MySQL service

```
root@gateway:~# systemctl restart mysql
```

You can find out Ezeelogin jump server **dbname** and mysql **username** from the **ez.conf** file

```
root@gateway:~# cat /usr/local/etc/ezlogin/ez.conf
```

```
system_folder /var/www/ezlogin/  
force_https no  
uri_path /ezlogin/  
db_host 10.10.1.11  
db_port 3306  
db_name ezlogin_qzms  
db_user ezlogin_edcjwz  
db_pass dsH)$s5xAE[QgFms  
db_prefix aqvo_  
cookie_encryption_key ASvs8^pnu^^X9  
cookie_name lcrfs  
cookie_path /ezlogin/  
www_folder /var/www/html/ezlogin/  
admin_user admin  
mysql_encrypt yes  
mysql_ssl_key /var/lib/mysql/client-key.pem  
mysql_ssl_cert /var/lib/mysql/client-cert.pem  
mysql_ssl_ca /var/lib/mysql/ca.pem  
mysql_ssl_capath /var/lib/mysql  
mysql_ssl_verify no
```

**Note:** Use this command for granting privileges for root " GRANT USAGE ON ezlogin\_databasename.\* TO 'root'@'Hostname or ip' WITH GRANT OPTION; "

## Login to MySQL

```
root@gateway:~# mysql -u root -p
[Enter password]
mysql> grant all on ezlogin_databasename.* to 'mysql_username'@'%' identified by 'password';
example : mysql > grant all on ezlogin_XXX.* to 'ezlogin_XXXX'@'%' identified by
'dsH)$s5xAE[QgFmfsfgg';
mysql > flush privileges;
mysql > exit
```

Check if you can log in to MySQL using Ezeelogin jump server databases.

```
root@gateway:~# mysql -u ezeelogin_database_username -h 10.11.1.11 -p
Enter Password:
mysql >
mysql > exit
```

**Note:** If you have any difficulties please [contact support](#)

## **Related Articles:**

[Configure Ezeelogin to use SSL for MySQL version 8 on Ubuntu](#)

[Configure ssh jump server to use SSL for Mariadb](#)

[Troubleshooting Mysql SSL in Secondary node](#)

[configure jump server to use SSL for MySQL](#)

[Basic MySQL commands for troubleshooting database related issues in Ezeelogin](#)

[Unable to access GUI while using MySQL SSL](#)

[failed to connect to database: Error: TLS/SSL error: Permission denied](#)

Online URL:

<https://www.ezeelogin.com/kb/article/configure-jump-server-to-use-ssl-for-mysql-server-5-7-version-203.html>