

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_XXX'@'%' 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>