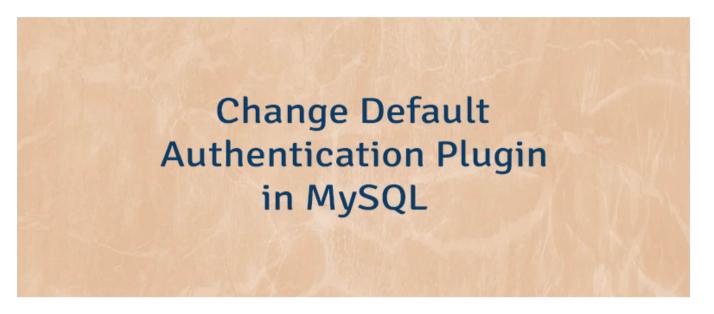# Change Default Authentication Plugin in MySQL

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In MySQL 8.0, the default authentication plugin is `caching_sha2_password` rather than `mysql_native_password`.

If application get errors related with `caching_sha2_password` plugin, it is possible that connector does not support this plugin yet.

The default authentication plugin is defined by `default_authentication_plugin` system variable. We can use `SHOW VARIABLES` statement to determine which authentication plugin is default.

```
SHOW VARIABLES LIKE 'default_authentication_plugin';
```

```
+-------------------------------+----------------------+
| Variable_name                 | Value                |
+-------------------------------+----------------------+
| default_authentication_plugin | caching_sha2_password |
```

```
+------------------------------+----------------------+
```

The default authentication plugin can be changed in MySQL configuration file. After that MySQL server must be restarted.

```
[mysqld]
default_authentication_plugin=mysql_native_password
```

The authentication plugin which will be used to authenticate the user is stored in the `mysql.user` system table.

```
SELECT user, host, plugin, authentication_string FROM mysql.user;
```

```
+--------+-----------+-----------------------+--------------------------------------------+
| user   | host      | plugin                | authentication_string                      |
+--------+-----------+-----------------------+--------------------------------------------+
| myuser | localhost | caching_sha2_password | $A$005$}-( RWHh "| [v `cXy MqYNSSeEANm5... |
| root   | localhost | mysql_native_password | *81F5E21E35407D884A6CD4A731AEBFB6AF209E1B   |
+--------+-----------+-----------------------+--------------------------------------------+
```

We can create the user and set its password without specifying the authentication plugin. In this case the default authentication plugin will be used.

```
CREATE USER 'myuser'@'localhost' IDENTIFIED BY 'pwd123';
```

When creating a new user we can specify the authentication plugin explicitly by using `IDENTIFIED WITH` statement.

```
CREATE USER 'myuser'@'localhost' IDENTIFIED WITH caching_sha2_password BY 'pwd123';
```

The `IDENTIFIED WITH` statement sets the user authentication plugin and clears the credentials to the empty string. So when changing the user authentication plugin we need to specify the plugin and the password at the same time.

```
ALTER USER 'myuser'@'localhost' IDENTIFIED WITH mysql_native_password BY 'psw123';
```