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## Mysql update password to new format

You have old\_passwords 1 in your my.cnf. I'm guessing it's because you used one of my small.cnf, my large.cnf etc templates provided with your MySQL distribution. These files can easily beat the most outdated sample configuration file competition. Usually it's no big deal: if any parameter is wrong, you just go and change it. Some variables, though, have a long-term effect, and are not easily reversed. What's the deal with old\_passwords? No one should use that anymore. This variable makes the password hashing algorithm compatible with that of MySQL 4.0. I'm pretty sure 4.0 was released nine years ago. I don't know anyone who still uses it (or 4.0 client libraries). The deal is this: with old\_passwords you get 16 hexadecimal digits (64 bits) hashing of your passwords. With so-called new passwords you get 40 hexadecimal digits (plus \*). So this is about better encryption of your password. Read more in the guide. How do I upgrade to a new password format? You can't just put a comment on the old\_passwords = 1 in the configuration file. If you do this, the next client to connect will try to match a hashed password of 41 characters to the existing value of 16 characters in the mysql.users table. So you need to make a change at the same time: both remove the old\_passwords and set a new password. You must know all account passwords before you begin. Interestingly, old\_passwords is both global and variable activation. To work on an example, assume that the account 'webuser'@'localhost' logs in with '123456'. Check the following options: root@mysql 5.1.51> Set old\_passwords=0; QUERY OK, 0 Affected Rows (0.00 sec) root@mysql-5.1.51> Select Password('123456'); +-----+ | Password('123456') | +-----+ | \*6BB4837EB74329105EE4568DDA7DC67ED2CA2AD9 | +-----+ 1 line in set (0.00 sec) root@mysql-5.1.51> power setting old\_passwords=1; QUERY OK, 0 Affected Rows (0.00 sec) root@mysql-5.1.51> Select Password('123456'); +-----+ | Password('123456') | +-----+ | Password('123456') | +-----+ | 565491d704013245 | +-----+ 1 line in set (0.00 seconds so, Password old\_passwords old\_passwords root@mysql consults old\_passwords the root@mysql.51.51.51. Set a password for 'webuser'@'localhost' = password('123456') go ahead and see the password entry in the mysql.users table. Pot, and try to match it with our 41 new hash characters. Time to go: root@mysql 5.1.51> SET GLOBAL old\_passwords=0; Query OK, 0 rows affected (0.00 seconds) This will apply to all new connections made from this moment on (do not affect existing connections). Make sure you have old\_passwords updated passwords for all accounts. When I say old and new passwords I mean the hash style. I thought I could try to specify the weed directly but I struggle to get it working (I'm a new MySQL). Unfortunately I can't update all users to the new type of passwords as it will cut off access to the system I can't control. The new default account to use the old style hash. 6.4.1.3 Switch away from pre-4.1 password hashing and the mysql\_old\_password mysql plugin validates connection attempts for each account listed in the mysql.user system table Using the name validation plugin in the plug-in column. If the plug-in column is empty, the server validates the account as follows: Before MySQL 5.7, the server uses the mysql\_native\_password or mysql\_old\_password plugin in slur, depending on the password hash format in the Password column. If the password value is empty or hash password 4.1 (41 characters), the server uses mysql\_native\_password. If the password value is a password hash before 4.1 (16 characters), the server uses mysql\_old\_password. (For more information about these hash templates, see Section 6.1.2.4, Hashing a password in MySQL.) Starting with MySQL 5.7, the server requires that the plug-in column not be two-emphatic and makes accounts with plug-in value blank. The Pre-4.1 password mysql\_old\_password are not available in MySQL 5.6 and are supported in MySQL 5.7. They provide a level of inferior security to that offered by hashing 4.1 password mysql\_native\_password plugin. Given the requirement in MySQL 5.7 that the plug-in column must be unsolved, along with removing mysql\_old\_password support, DBAs are advised to upgrade accounts as follows: Upgrade user accounts mysql\_native\_password implied to use it explicitly to upgrade user accounts in mysql\_old\_password (implied or explicitly) to use mysql\_native\_password explicitly the instructions in this section to describe how to make these upgrades. The result is that no account has a blank plug-in value and no account uses password hashing before 4.1 or mysql\_old\_password electronically. As a version of these instructions, DBAs may offer users the option to upgrade to sha256\_password plugin, which verifies using SHA-256 password access hinges. For information about Plug-in, see Section 6.4.1.4, Sha-256 ConnectionAble Authentication. The following table lists the types of mysql.user user accounts that are considered in this discussion. Accounts that correspond to the lines mysql\_native\_password add-in do not require an upgrade operation (because no change is required in the plug-in or hash format). For accounts that match the lines for which the password is empty, consider asking account holders to select a password (or require it by changing a user to expire blank account passwords). Upgrading accounts from implicit to mysql\_native\_password using accounts that have a blank plug-in and using a password hash 4.1 mysql\_native\_password password. To upgrade these accounts for use mysql\_native\_password, follow these statements: update mysql.user SET plugin = 'mysql\_native\_password' WHERE plugin = '' AND (password = '' or length (password) = 41); flush permissions; Before MySQL 5.7, you can make these statements to proactively boost accounts. Starting with MySQL 5.7, you can run mysql\_upgrade, which performs the same action between its upgrade operations. NOTES: This correct upgrade operation is safe to perform at any time because it makes the mysql\_native\_password plugin explicit only for accounts that are already using it in a seline. This does not require password changes, so it can be done without affecting users or requiring their involvement in the upgrade process. User accounts must be upgraded mysql\_old\_password (implied or explicitly) for mysql\_native\_password explicit use. This requires changing the plug-in and changing the password from pre-hash format-4.1 to 4.1. For the accounts that are currently included to be upgraded, one of these conditions is true: The account uses mysql\_old\_password in a pity because the plug-in column is empty and the password has the hash pre-4.1 format (16 characters). The account uses mysql\_old\_password explicit permission. To identify such accounts, use this query: select user, host, password from mysql.user WHERE (plugin = '' and length (password) = 16) or plugin = 'mysql\_old\_password'; The following discussion provides two methods for updating this set of accounts. They have different characteristics, so read both and decide what is best suited for a given MySQL installation. Method 1. Properties of this method: It requires that the server and clients work secure\_auth=0 until all users are upgraded to mysql\_native\_password. (Otherwise, users cannot connect to the server by using their old-format password hashes to upgrade to a hash in a new format.) It works for MySQL 5.5 and 5.6. In 5.7, it does not work because the server requires accounts to have a no-data plugin and makes them different. Therefore, if you have already upgraded to 5.7, select Method 2, which is described later. You must verify that the server secure\_auth=0. All user accounts mysql\_old\_password, set them to a blank plugin: update mysql.user SET plugin = '' plugin where = 'mysql\_old\_password'; flush permissions; To also expire the password for affected accounts, use these statements instead: update mysql.user SET plugin = '', password\_expired = 'Y' WHERE plugin = 'mysql\_old\_password'; flush permissions; Affected users can now reset their password to use hashing 4.1. Ask any user who currently has a blank plugin to connect to the server and execute these statements: SET old\_passwords = 0; Set Password = Password(User Selected Password); Note The client-side option --secure-auth is turned on by default, so remind users to disable it or they cannot connect: Shell> mysql -u user\_name -p --secure-auth=0 After an affected user has made these statements, you can configure the appropriate account plugin for mysql\_native\_password to explicit. Alternatively, you can occasionally enable these statements to find and repair accounts for which the affected users reset their password: update mysql.user SET plugin = 'mysql\_native\_password' WHERE PLUGin= '' AND (password = '' or length (password) = 41); flush permissions; When there are no more accounts with a blank plugin, this query returns a blank result: Select User, Host, Password from mysql.user WHERE Plugin = '' and Length (Password) = 16; At this point, all accounts were moved away from password hashing before 4.1 and you no longer need to start the server secure\_auth=0. Method 2. Properties of this method: It assigns each affected account a new password, so you must tell each such user the new password and ask the user to select a new account. Communication of passwords to users is out of range of MySQL, but should be done with caution. Do not require server or clients to start secure\_auth=0. It works for any version of MySQL 5.5 or later (and 5.7 has an easier variable). With this



enabled, as described in Windows Connectable Authentication Installation. Once there's a DBA The server-side plugin and setting up accounts to use, clients can connect using these accounts without any other installation required by them. To view the Windows Authentication Plugin in the section identified with the CREATE USER or GRANT statement, use the name authentication\_windows. Assume that Windows Rafal and Tasha users are allowed to connect to MySQL, as well as all users in the Administrators or Power Users group. To configure this, create a MySQL account named sql\_admin that uses the Windows plugin for authentication: create an sql\_admin user authentication\_windows affiliated with The Rafal, Tasha, Administrators, Power Users; The name of the plugin authentication\_windows. The following string for the AS keyword is the validation string. It specifies that Windows users named Rafal or Tasha may authenticate to the server as a MySQL user sql\_admin, such as all Windows users in the Administrators or Power Users group. The last group name contains a space, so it should be quoted with double quote characters. After you create a sql\_admin account, a user who logs on to Windows can try to connect to the server by using this account: C:\&gt; mysql --user=sql\_admin no password is required here. The authentication\_windows uses the Windows Security API to determine which windows user is connecting. If this user is called Rafal or Tasha, or is a member of the Administrators or Power Users group, the server grants access and the client is authenticated as sql\_admin and has the permissions granted to the sql\_admin account. Validation string syntax for the Windows authentication plugin follows these rules: The string consists of mapping one or more comma-separated users. Each user mapping associates a Windows user or group name with a MySQL user name: win\_user\_or\_group\_name=mysql\_user\_name win\_user\_or\_group\_name For the last syntax, with no given mysql\_user\_name value, the implicit value is the MySQL user created by the CREATE USER statement. Therefore, these statements are equivalent: creating a user sql\_admin a user authentication\_windows Rafal=Tasha, Administrators.; Create a sql\_admin identified authentication\_windows Rafal=sql\_admin, Tasha=sql\_admin, Administrators=sql\_admin,Power Users=sql\_admin; Each backslash character (\) must be roughly multiplied because the backslash is the refuge character in MySQL strings. Leading spaces and graphs not within double quotation marks are ignored. Values win\_user\_or\_group\_name contain anything but an equal sign, comma, or space. If win\_user\_or\_group\_name or mysql\_user\_name is quoted in double quotation marks, everything between quotation marks is part of the value. This is necessary, for example, if the name contains space characters. Characters in double quotation marks are valid except double quotation marks and the backslash. To include each character, you'll escape it with a backslash. win\_user\_or\_group\_name use standard syntax for Windows administrators, locally, or in a domain. Examples (note of multiplication of backslash): domain\user.user domain\group BUILTIN\WellKnown\Group When the server starts it to validate a client, the plug-in scans the left-to-right authentication string for a user or group that is compatible with the Windows user. If a match exists, the plug-in returns the mysql\_user\_name corresponding to the MySQL server. If there is no match, authentication fails. User name matching takes preference over group name matching. Assume that a Windows user named win\_user is a member of win\_group and the authentication string looks like this: 'win\_group = sql\_user1, win\_user = sql\_user2' When win\_user connects to a MySQL server, there is a match to both win\_group and win\_user. The plug-in validates the sql\_user2 because the more specific user match takes precedence over group matching, even though the group first appears in the validation string. Windows authentication always works for connections from the same computer as the server. For connections between computers, both computers must be registered using Windows Active Directory. If they are in the same Windows domain, you do not need to specify a domain name. You can also allow connections from another domain, as in this example: creating a user identified sql\_accounting with authentication\_windows 'SomeDomain\Accounting'; Here SomeDomain is the name of the other domain. The backslash character is multiplied because it is the MySQL escape character within strings. MySQL supports the idea of proxy users that a client can connect to and verify to a MySQL server by using one account, but when logged on has permissions of another account (see Section 6.2.12, Proxy Users). Suppose you want Windows users to log on by using a single user name but are directed based on their Windows user and group names to specific MySQL accounts as follows: Local local\_user and MyDomain\domain\_user users in the domain should map to a local\_wlad MySQL account. Users in the MyDomain\Developers domain should map to a local\_dev MySQL account. Local computer administrators should map local\_admin MySQL. To configure this, create a proxy account for Windows users to connect to and configure that account so that users and map groups to the appropriate MySQL accounts (local\_wlad, local\_dev, local\_admin). Additionally, grant MySQL accounts the appropriate permissions for the actions they need to perform. The following instructions win\_proxy as proxy account, local\_wlad local\_dev and local\_admin as proxied accounts. Create Proxy MySQL account: Create win\_proxy a user identified with authentication\_windows as local\_user = local\_wlad, MyDomain\domain\_user = local\_wlad, MyDomain\Developer = local\_dev, BUILTIN\Administrators = local\_admin; For proxying to work, proxy accounts must exist, so create them: Create a user local\_wlad by secret\_wlad\_pass; Create local\_dev user by secret\_dev\_pass; Create local\_admin user by secret\_admin\_pass; If you do not not notified anyone of the passwords for these accounts, customers will not be able to use them to connect directly to the MySQL server. Instead, it's expected that users who authenticate using Windows will use your win\_proxy account. You must also make GRANT declarations (not displayed) that give each proxy account the necessary permissions to access MySQL. Grant the proxy account the proxy permission for each proxy account: grant a proxy to local\_wlad to win\_proxy; a proxy grant local\_dev win\_proxy; grant a proxy local\_admin win\_proxy; Now Windows local\_user and MyDomain\domain\_user users can connect to a MySQL server as win\_proxy and when authenticated have the account permissions granted in the authentication string (in this case, local\_wlad). Uses win\_proxy the MyDomain\Developers group that connects as local\_dev that has the permissions of local\_admin win\_proxy account. For information about default proxy accounts, see Section 6.2.12, Proxy users. To use the Windows Authentication Plugin with Connector/NET Connection Strings in Connector/NET 6.4.4 or later, see Using the Genuine Windows Authentication Plugin. Page 6.4.4.1.8 Socket Peer certificate for connecting authentication plugin auth\_socket server-side authentication authenticates clients that connect from the local host by using a Unix jack file. The plug-in uses SO\_PEERCRED an outlet option to get information about the user running the client program. Therefore, the plug-in can only be used on systems that SO\_PEERCRED, such as Linux. The source code for this plugin can be examined as a relatively simple example of how to write a validation plugin for loading. The following table shows the file names of the plug-in and directory. The file must be located in the named directory by plugin\_dir system. Table 6.14 Directory Plugin for Socket Peer Certificate Authentication Plugin or File Plugin or Server-Side Plugin File Name auth\_socket Client Side Plugin None, see Discussion Library File auth\_socket.so The following sections provide installation and use information specific to the pluggable socket For general information about connectable authentication in MySQL, see Section 6.2.11, Connectable Authentication. Install socket-connected authentication This section describes how to install the Socket Authentication Plugin. For general information about installing plug-ins, see Section 5.5.1, Installing and Uninstalling Plugins. To be changed by the server, the plug-in library file must be located in the MySQL plug-in directory (the directory named by the plugin\_dir variable). If necessary, configure the plug-in directory location by configuring the plugin\_dir the server starts. To load the plug-in when you start the server, use the ----load-plug-in option to name the directory file that contains it. Using this plug-in load method, you must give the option each time the server is started. For example, place these lines in the server's my.cnf file: [mysqld] plug-in-load-add=auth\_socket.so After changing my.cnf, restart the server to cause the new settings to take effect. Or, to load the plugin at runtime, use this statement: Install the SONAME auth\_socket SONAME plugin auth\_socket.so; Install PLUGIN loads the plug-in immediately, and also registers it in the mysql.plugins system table to cause the server to load it for each subsequent normal session without the need for --plugins-load-add-ins. To verify a plug-in installation, check INFORMATION\_SCHEMA. Add-in table use the SHOW plugin declaration (see Section 5.5.2, Obtain Server Plugin Information). For example: mysql>select PLUGIN\_NAME, PLUGIN\_STATUS from INFORMATION\_SCHEMA.Plug-ins PLUGIN\_NAME '%socket%'; +-----+-----+ | PLUGIN\_NAME | PLUGIN\_STATUS | +-----+-----+ | auth\_socket | Active | +-----+-----+ If the plug-in fails to initialize, check the server error log for diagnostic messages. To associate MySQL accounts with a socket plug-in, see Using plug-in authentication. Uninstalling plug-in plug-in The method used to uninstall a socket authentication plug-in depends on how you installed it: If you installed the plug-in when you started the server using an option --Add-in-Load Plug-in, restart the server without option. If you installed the plug-in at runtime using the INSTALL PLUGIN declaration, it will remain installed in server restarts. To uninstall, use the Uninstall Plugin: Uninstall auth\_socket; Using plug-in plug-in authentication, a jack checks whether the socket user name (the operating system user name) matches the MySQL user name specified by the client program to the server and allows the connection only if the names match. Assume that a MySQL account is created for an operating system user named valerie who should be authenticated by plug-in auth\_socket for connections from the local host by using a socket file: Create a user 'valerie'@localhost identified with If a user of the local host with the login name of stefanie runs mysql with the option --user=valerie to connect through a socket file, the server uses auth\_socket to verify the client. The plugin determines that the value of the - valerie option differs from the user name of the client (Stephanie) and refuses the connection. If a user named valerie tries the same thing, the plugin finds that the MySQL username and username are also valerie and allows the connection. However, the plug-in also refuses the connection for valerie if the connection is made using another protocol, such as TCP/IP. Page 7.6.4.1.9 An authentication check can be connected to MySQL including a test plug-in that checks for account credentials and a success log or failure in the server error log. This is a loadable (unstructured) plug-in and must be installed before use. The source code of the test plugin is separate from the server source, as opposed to the original built-in plug-in, so it can be examined as a relatively simple example demonstrating how to write a loadable authentication plugin. Note This plug-in is intended for testing and development purposes, and is not intended for use in production environments or on servers exposed to public networks. The following table shows the file names of the plug-in and directory. The file name extension may be different on your system. The file must be located in the named directory by plugin\_dir system. Table 6.15 Directory plugin names for the Test Authentication Plugin or File Plugin or Server-Side Plugin File Name test\_plugin\_server Client-Side Plugin auth\_test\_plugin File Directory auth\_test\_plugin.so The following sections provide specific installation and usage information to check pluggable authentication: For general information about authentication to a connection in MySQL, see Section 6.2.11, Pluggable Authentication. Install Test Connectable Authentication This section describes how to install the test validation plug-in. For general information about installing plug-ins, see Section 5.5.1, Installing and Uninstalling Plugins. To be changed by the server, the plug-in library file must be located in the MySQL plug-in directory (the directory named by the plugin\_dir variable). If necessary, configure the plug-in directory location by configuring the plugin\_dir the server starts. To load the plug-in when you start the server, use the ----load-plug-in option to name the directory file that contains it. Using this plug-in load method, you must give the option each time the server is started. For example, place these lines in the server's my.cnf file, adjusting the .so extension for your platform if necessary: [mysqld] Plug-in-Load Supplement =auth\_test\_plugin.so After changing my.cnf, restart the server to cause the new settings to take effect. Or, to load the plugin at runtime, use this statement, and coordinate the .so extension for your platform as install soname test\_plugin\_server soname plugin 'auth\_test\_plugin.so'; Install PLUGIN loads the plug-in immediately, and also registers it in the mysql.plugins system table to cause the server to load it for each subsequent normal session without the need for --plugins-load-add-ins. To verify a plug-in installation, check INFORMATION\_SCHEMA. Add-in table or use the SHOW plugin declaration (see Section 5.5.2, Obtain Server Plugin Information). For example: mysql>select PLUGIN\_NAME, PLUGIN\_STATUS from INFORMATION\_SCHEMA.Plugins with PLUGIN\_NAME '%test\_plugin%'; +-----+-----+ | PLUGIN\_NAME | +-----+-----+ | test\_plugin\_server | Active | +-----+-----+ If the plug-in fails to initialize, check the server error log for diagnostic messages. To associate MySQL accounts with the test plug-in, see Using test connectable authentication. Uninstalling a plug-in authentication check The method used to uninstall the test validation plug-in depends on how you installed it: If you installed the plug-in when you started the server by using a --plug-load-add option, restart the server without an option. If you installed the plug-in at runtime using the INSTALL PLUGIN declaration, it will remain installed in server restarts. To uninstall it, use the Uninstall Plugin: Uninstall this\_test\_plugin\_server; Using test connectable authentication to use the test validation plugin, create an account and plug-in name for the IDENTIFIED WITH section: Create a user 'testuser'@localhost identified with test\_plugin\_server; Set password for 'testuser'@localhost = password('testpassword'); Then provide the --user and --password options for this account when connecting to the server. For example: Shell> mysql --user=testuser --Password Enter password: testpassword The plugin fetches the password as received from the client and compares it to the value stored in the authentication\_string column of the account bar in the mysql.user system table. If both values match, the plug-in returns the authentication\_string as the new efficient user ID. You can search the server error log for a message that indicates whether authentication succeeded (note that the password is reported as a user): (Note) Plugin test\_plugin\_server Reporting: 'Successfully authenticated testpassword user' page 8.6.4.2 plugins correct connection control MySQL 5.6.35, MySQL Server includes a plug-in library that allows administrators to display an increasing lag in the server's response to connection attempts after a configurable number of consecutive failed attempts. This capability provides a deterrent that terrorizes brutal power attacks against MySQL user accounts. The plug-in library contains two plug-ins: CONNECTION\_CONTROL incoming connection attempts and adds a delay to server responses if necessary. It also exposes system variables that enable the configuration of its operation and a state variable that provides basic monitoring information. The CONNECTION\_CONTROL uses the audit plug-in interface (see Writing plugins for auditing). To collect information, it subscribes to MYSQL\_AUDIT\_CONNECTION\_CLASSMASK event and MYSQL\_AUDIT\_CONNECTION\_CONNECT MYSQL\_AUDIT\_CONNECTION\_CHANGE\_USER to check whether the server needs to display a delay before responding to connection attempts. CONNECTION\_CONTROL\_FAILED\_LOGIN\_ATTEMPTS implements a INFORMATION\_SCHEMA that reveals more detailed monitoring information for failed connection attempts. The following sections provide information about installing and configuring a connection control plug-in. For information about CONNECTION\_CONTROL\_FAILED\_LOGIN\_ATTEMPTS, see Section 21.33.1, INFORMATION\_SCHEMA CONNECTION\_CONTROL\_FAILED\_LOGIN\_ATTEMPTS. Abstract Page 9 This is MySQL™ reference guide. It records MySQL 5.6 through 5.6.50, as well as NDB cluster releases based on versions 7.3 and 7.4 of the NDB through 5.6.50-ndb-7.3.31 and 5.6.50-ndb-7.4.30, respectively. It may include a record of features of unpublished Versions of MySQL. For information about the released versions, see the MySQL 5.6 release notes. MySQL 5.6 features. This guide describes features not included in each edition of MySQL 5.6; These features may not be included in your edition of MySQL 5.6. If you have questions about the features included in the MySQL 5.6 release, review your MySQL 5.6 license agreement or contact your Oracle sales representative. For comments detailing the changes in each release, see the MySQL 5.6 release notes. For legal information, including licensing information, see the early and legal notices. For help using MySQL, visit the MySQL forums, where you can discuss your issues with other MySQL users. 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