
Chapter 6 Security

Table of Contents

6.1 General Security Issues	1170
6.1.1 Security Guidelines	1171
6.1.2 Keeping Passwords Secure	1172
6.1.3 Making MySQL Secure Against Attackers	1175
6.1.4 Security-Related mysqld Options and Variables	1177
6.1.5 How to Run MySQL as a Normal User	1177
6.1.6 Security Considerations for LOAD DATA LOCAL	1178
6.1.7 Client Programming Security Guidelines	1182
6.2 Access Control and Account Management	1184
6.2.1 Account User Names and Passwords	1185
6.2.2 Privileges Provided by MySQL	1186
6.2.3 Grant Tables	1204
6.2.4 Specifying Account Names	1214
6.2.5 Specifying Role Names	1216
6.2.6 Access Control, Stage 1: Connection Verification	1216
6.2.7 Access Control, Stage 2: Request Verification	1220
6.2.8 Adding Accounts, Assigning Privileges, and Dropping Accounts	1222
6.2.9 Reserved Accounts	1225
6.2.10 Using Roles	1226
6.2.11 Account Categories	1233
6.2.12 Privilege Restriction Using Partial Revokes	1236
6.2.13 When Privilege Changes Take Effect	1243
6.2.14 Assigning Account Passwords	1243
6.2.15 Password Management	1245
6.2.16 Server Handling of Expired Passwords	1256
6.2.17 Pluggable Authentication	1258
6.2.18 Proxy Users	1263
6.2.19 Account Locking	1271
6.2.20 Setting Account Resource Limits	1272
6.2.21 Troubleshooting Problems Connecting to MySQL	1274
6.2.22 SQL-Based Account Activity Auditing	1279
6.3 Using Encrypted Connections	1280
6.3.1 Configuring MySQL to Use Encrypted Connections	1281
6.3.2 Encrypted Connection TLS Protocols and Ciphers	1288
6.3.3 Creating SSL and RSA Certificates and Keys	1296
6.3.4 Connecting to MySQL Remotely from Windows with SSH	1305
6.4 Security Components and Plugins	1305
6.4.1 Authentication Plugins	1306
6.4.2 The Connection-Control Plugins	1378
6.4.3 The Password Validation Component	1384
6.4.4 The MySQL Keyring	1397
6.4.5 MySQL Enterprise Audit	1465
6.4.6 The Audit Message Component	1542
6.4.7 MySQL Enterprise Firewall	1544
6.5 MySQL Enterprise Data Masking and De-Identification	1574
6.5.1 MySQL Enterprise Data Masking and De-Identification Elements	1576
6.5.2 Installing or Uninstalling MySQL Enterprise Data Masking and De-Identification	1576