

Reverse Privileges

User Level : Global Privileges

- ▶ The mysql.user table contains information about users that have permission to access the MariaDB server, and their global privileges
- ▶ GRANT <PRIV> ON <SCHEMA>.<TABLE> TO FOO;
- ▶ DENY <PRIV> ON <SCHEMA>.<TABLE> TO FOO;
- ▶ REVOKE DENY <PRIV> ON <SCHEMA>.<TABLE> FROM FOO;

Database level Privileges

- ▶ The mysql.db table contains information about database-level privileges
- ▶ A user may not be granted a privilege at the database level, but may still have permission on a table level
- ▶ DENY <PRIV> ON db.<TABLE> TO <USER>;

Table Level Privileges

- ▶ The `mysql.tables_priv` table contains information about table-level privileges
- ▶ `DENY <PRIV> ON <SCHEMA>.table TO <USER>;`

COLUMN LEVEL PRIVILEGES

- ▶ The `mysql.columns_priv` table contains information about column-level privileges
- ▶ More complex to implement as initial checks need to be made according to the hierarchy: User, Database, Table
- ▶ `DENY <PRIV> (COL1, COL2) ON <SCHEMA>.<TABLE> TO <USER>;`

- ▶ Ability to DENY access to specific Users, Databases, Tables, etc. while granting access to the rest, without having to grant first to all and then deny specifically
- ▶ Involves modification of acls, grant, grant reload, alter/create user table functions with extra 'deny' arguments for setting the deny flag, making the performance similar to GRANT at User, Table and Database Level
- ▶ Discussions for column level, proxy and procs level privileges
- ▶ DENY supercedes GRANT, REVOKE and REVOKE DENY is the way to remove deny. DENY doesn't alter GRANT but supercedes it
- ▶ DENY command updates/creates existing/creating a new entry in the system table with the deny field set

PROCS AND PROXY LEVEL PRIVILEGES

- ▶ The `mysql.proxies_priv` table contains information about proxy privileges.
- ▶ The `mysql.procs_priv` table contains information about stored procedure and stored function privileges