### Grant System Tables

These system tables contain grant information about user accounts and the privileges held by them:

* user: User accounts, global privileges, and other non-privilege columns.
* db: Database-level privileges.
* tables\_priv: Table-level privileges.
* columns\_priv: Column-level privileges.
* procs\_priv: Stored procedure and function privileges.
* proxies\_priv: Proxy-user privileges.

For more information about the structure, contents, and purpose of the grant tables, see [Section 7.2.2, “Grant Tables”](http://dev.mysql.com/doc/refman/5.7/en/grant-tables.html).

### Object Information System Tables

These system tables contain information about stored programs, user-defined functions, and server-side plugins:

* event: Information about Event Scheduler events. See [Section 21.4, “Using the Event Scheduler”](http://dev.mysql.com/doc/refman/5.7/en/event-scheduler.html). The server loads events listed in this table during its startup sequence, unless started with the [--skip-grant-tables](http://dev.mysql.com/doc/refman/5.7/en/server-options.html#option_mysqld_skip-grant-tables) option.
* func: Information about user-defined functions (UDFs). See [Section 26.4, “Adding New Functions to MySQL”](http://dev.mysql.com/doc/refman/5.7/en/adding-functions.html). The server loads UDFs listed in this table during its startup sequence, unless started with the [--skip-grant-tables](http://dev.mysql.com/doc/refman/5.7/en/server-options.html#option_mysqld_skip-grant-tables) option.
* plugin: Information about server-side plugins. See [Section 6.5.2, “Installing and Uninstalling Plugins”](http://dev.mysql.com/doc/refman/5.7/en/server-plugin-loading.html), and [Section 26.2, “The MySQL Plugin API”](http://dev.mysql.com/doc/refman/5.7/en/plugin-api.html). The server loads plugins listed in this table during its startup sequence, unless started with the [--skip-grant-tables](http://dev.mysql.com/doc/refman/5.7/en/server-options.html#option_mysqld_skip-grant-tables) option.

The plugin table uses the InnoDB storage engine as of MySQL 5.7.6, MyISAM before that.

* proc: Information about stored procedures and functions. See [Section 21.2, “Using Stored Routines (Procedures and Functions)”](http://dev.mysql.com/doc/refman/5.7/en/stored-routines.html).

### Log System Tables

The server uses these system tables for logging:

* general\_log: The general query log table.
* slow\_log: The slow query log table.

Log tables use the CSV storage engine.

For more information, see [Section 6.4, “MySQL Server Logs”](http://dev.mysql.com/doc/refman/5.7/en/server-logs.html).

### Server-Side Help System Tables

These system tables contain server-side help information:

* help\_category: Information about help categories.
* help\_keyword: Keywords associated with help topics.
* help\_relation: Mappings between help keywords and topics.
* help\_topic: Help topic contents.

These tables use the InnoDB storage engine as of MySQL 5.7.5, MyISAM before that.

For more information, see [Section 6.1.10, “Server-Side Help”](http://dev.mysql.com/doc/refman/5.7/en/server-side-help-support.html).

### Time Zone System Tables

These system tables contain time zone information:

* time\_zone: Time zone IDs and whether they use leap seconds.
* time\_zone\_leap\_second: When leap seconds occur.
* time\_zone\_name: Mappings between time zone IDs and names.
* time\_zone\_transition, time\_zone\_transition\_type: Time zone descriptions.

These tables use the InnoDB storage engine as of MySQL 5.7.5, MyISAM before that.

For more information, see [Section 11.6, “MySQL Server Time Zone Support”](http://dev.mysql.com/doc/refman/5.7/en/time-zone-support.html).

### Replication System Tables

The server uses these system tables to support replication:

* gtid\_executed: Table for storing GTID values. See [mysql.gtid\_executed Table](http://dev.mysql.com/doc/refman/5.7/en/replication-gtids-concepts.html#replication-gtids-gtid-executed-table).

The gtid\_executed table uses the InnoDB storage engine.

* ndb\_binlog\_index: Binary log information for MySQL Cluster replication. See [Section 19.6.4, “MySQL Cluster Replication Schema and Tables”](http://dev.mysql.com/doc/refman/5.7/en/mysql-cluster-replication-schema.html).
* slave\_master\_info, slave\_relay\_log\_info, slave\_worker\_info: Used to store replication information on slave servers. See [Section 18.2.4, “Replication Relay and Status Logs”](http://dev.mysql.com/doc/refman/5.7/en/slave-logs.html).

These tables use the InnoDB storage engine.

### Optimizer System Tables

These system tables are for use by the optimizer:

* innodb\_index\_stats, innodb\_table\_stats: Used for InnoDB persistent optimizer statistics. See [Section 15.6.11.1, “Configuring Persistent Optimizer Statistics Parameters”](http://dev.mysql.com/doc/refman/5.7/en/innodb-persistent-stats.html).
* server\_cost, engine\_cost: The optimizer cost model uses tables that contain cost estimate information about operations that occur during query execution. server\_cost contains optimizer cost estimates for general server operations.engine\_cost contains estimates for operations specific to particular storage engines. See [Section 9.9.5, “The Optimizer Cost Model”](http://dev.mysql.com/doc/refman/5.7/en/cost-model.html).

These tables use the InnoDB storage engine.

### Miscellaneous System Tables

Other system tables do not fall into the preceding categories:

* audit\_log\_filter, audit\_log\_user: If MySQL Enterprise Audit is installed, these tables provide persistent storage of audit log filter definitions and user accounts. See [Section 7.5.4.7.1, “Audit Log Tables”](http://dev.mysql.com/doc/refman/5.7/en/audit-log-reference.html#audit-log-tables).
* firewall\_users, firewall\_whitelist: If MySQL Enterprise Firewall is installed, these tables provide persistent storage for information used by the firewall. See [Section 7.5.5, “MySQL Enterprise Firewall”](http://dev.mysql.com/doc/refman/5.7/en/firewall.html).
* servers: Used by the FEDERATED storage engine. See [Section 16.8.2.2, “Creating a FEDERATED Table Using CREATE SERVER”](http://dev.mysql.com/doc/refman/5.7/en/federated-create-server.html).

The servers table uses the InnoDB storage engine as of MySQL 5.7.6, MyISAM before that.

**columns\_priv**

表注释： Column privileges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Host *(主键)* | char(60) | 否 |  | **主机** |
| Db *(主键)* | char(64) | 否 |  | 数据库 |
| User *(主键)* | char(32) | 否 |  | 用户 |
| Table\_name *(主键)* | char(64) | 否 |  | 表名 |
| Column\_name *(主键)* | char(64) | 否 |  | 列名 |
| Timestamp | timestamp | 否 | CURRENT\_TIMESTAMP | 当前时间戳 |
| Column\_priv | set('Select', 'Insert', 'Update', 'References') | 否 |  | 列的权限 |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Host |  | A | 否 |  |
| Db |  | A | 否 |
| User |  | A | 否 |
| Table\_name |  | A | 否 |
| Column\_name | 0 | A | 否 |

**db**

表注释： Database privileges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Host *(主键)* | char(60) | 否 |  |  |
| Db *(主键)* | char(64) | 否 |  |  |
| User *(主键)* | char(32) | 否 |  |  |
| Select\_priv | enum('N', 'Y') | 否 | N |  |
| Insert\_priv | enum('N', 'Y') | 否 | N |  |
| Update\_priv | enum('N', 'Y') | 否 | N |  |
| Delete\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_priv | enum('N', 'Y') | 否 | N |  |
| Drop\_priv | enum('N', 'Y') | 否 | N |  |
| Grant\_priv | enum('N', 'Y') | 否 | N |  |
| References\_priv | enum('N', 'Y') | 否 | N |  |
| Index\_priv | enum('N', 'Y') | 否 | N |  |
| Alter\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_tmp\_table\_priv | enum('N', 'Y') | 否 | N |  |
| Lock\_tables\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_view\_priv | enum('N', 'Y') | 否 | N |  |
| Show\_view\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_routine\_priv | enum('N', 'Y') | 否 | N |  |
| Alter\_routine\_priv | enum('N', 'Y') | 否 | N |  |
| Execute\_priv | enum('N', 'Y') | 否 | N |  |
| Event\_priv | enum('N', 'Y') | 否 | N |  |
| Trigger\_priv | enum('N', 'Y') | 否 | N |  |

**索引**

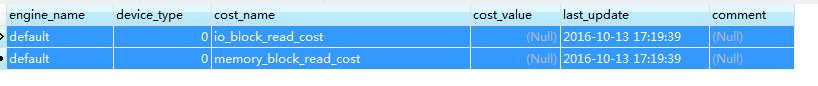
| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Host |  | A | 否 |  |
| Db |  | A | 否 |
| User | 1 | A | 否 |
| User | BTREE | 否 | 否 | User |  | A | 否 |  |

**engine\_cost 引擎层代价模型**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| engine\_name *(主键)* | varchar(64) | 否 |  | 引擎的名称 |
| device\_type *(主键)* | int(11) | 否 |  |  |
| cost\_name *(主键)* | varchar(64) | 否 |  | 代价模型的名称 |
| cost\_value | float | 是 | *NULL* | 代价模型的值 |
| last\_update | timestamp | 否 | CURRENT\_TIMESTAMP |  |
| comment | varchar(1024) | 是 | *NULL* |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | cost\_name | 2 | A | 否 |  |
| engine\_name | 2 | A | 否 |
| device\_type | 2 | A | 否 |

* **** io\_block\_read\_cost (default 1.0)  
  从磁盘读数据的代价，对innodb来说，表示从磁盘读一个page的代价
* memory\_block\_read\_cost (default 1.0)  
  从内存读数据的代价，对innodb来说，表示从buffer pool读一个page的代价

目前io\_block\_read\_cost和memory\_block\_read\_cost默认值均为1，实际生产中建议酌情调大memory\_block\_read\_cost，特别是对普通硬盘的场景。

**event**

表注释： Events记录事件的所有的信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| db *(主键)* | char(64) | 否 |  |  |
| name *(主键)* | char(64) | 否 |  |  |
| body | longblob | 否 |  |  |
| definer | char(93) | 否 |  |  |
| execute\_at | datetime | 是 | *NULL* |  |
| interval\_value | int(11) | 是 | *NULL* |  |
| interval\_field | enum('YEAR', 'QUARTER', 'MONTH', 'DAY', 'HOUR', 'MINUTE', 'WEEK', 'SECOND', 'MICROSECOND', 'YEAR\_MONTH', 'DAY\_HOUR', 'DAY\_MINUTE', 'DAY\_SECOND', 'HOUR\_MINUTE', 'HOUR\_SECOND', 'MINUTE\_SECOND', 'DAY\_MICROSECOND', 'HOUR\_MICROSECOND', 'MINUTE\_MICROSECOND', 'SECOND\_MICROSECOND') | 是 | *NULL* |  |
| created | timestamp | 否 | CURRENT\_TIMESTAMP |  |
| modified | timestamp | 否 | 0000-00-00 00:00:00 |  |
| last\_executed | datetime | 是 | *NULL* |  |
| starts | datetime | 是 | *NULL* |  |
| ends | datetime | 是 | *NULL* |  |
| status | enum('ENABLED', 'DISABLED', 'SLAVESIDE\_DISABLED') | 否 | ENABLED |  |
| on\_completion | enum('DROP', 'PRESERVE') | 否 | DROP |  |
| sql\_mode | set('REAL\_AS\_FLOAT', 'PIPES\_AS\_CONCAT', 'ANSI\_QUOTES', 'IGNORE\_SPACE', 'NOT\_USED', 'ONLY\_FULL\_GROUP\_BY', 'NO\_UNSIGNED\_SUBTRACTION', 'NO\_DIR\_IN\_CREATE', 'POSTGRESQL', 'ORACLE', 'MSSQL', 'DB2', 'MAXDB', 'NO\_KEY\_OPTIONS', 'NO\_TABLE\_OPTIONS', 'NO\_FIELD\_OPTIONS', 'MYSQL323', 'MYSQL40', 'ANSI', 'NO\_AUTO\_VALUE\_ON\_ZERO', 'NO\_BACKSLASH\_ESCAPES', 'STRICT\_TRANS\_TABLES', 'STRICT\_ALL\_TABLES', 'NO\_ZERO\_IN\_DATE', 'NO\_ZERO\_DATE', 'INVALID\_DATES', 'ERROR\_FOR\_DIVISION\_BY\_ZERO', 'TRADITIONAL', 'NO\_AUTO\_CREATE\_USER', 'HIGH\_NOT\_PRECEDENCE', 'NO\_ENGINE\_SUBSTITUTION', 'PAD\_CHAR\_TO\_FULL\_LENGTH') | 否 |  |  |
| comment | char(64) | 否 |  |  |
| originator | int(10) | 否 |  |  |
| time\_zone | char(64) | 否 | SYSTEM |  |
| character\_set\_client | char(32) | 是 | *NULL* |  |
| collation\_connection | char(32) | 是 | *NULL* |  |
| db\_collation | char(32) | 是 | *NULL* |  |
| body\_utf8 | longblob | 是 | *NULL* |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | db |  | A | 否 |  |
| name | 0 | A | 否 |

**func**

表注释： User defined functions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| name *(主键)* | char(64) | 否 |  |  |
| ret | tinyint(1) | 否 | 0 |  |
| dl | char(128) | 否 |  |  |
| type | enum('function', 'aggregate') | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | name | 0 | A | 否 |  |

**general\_log**

表注释： General log

SHOW VARIABLES LIKE 'general\_log';

SET GLOBAL general\_log=ON;

SELECT \* from mysql.general\_log;

SHOW VARIABLES LIKE '%log\_output%';

SET GLOBAL log\_output='TABLE,FILE'

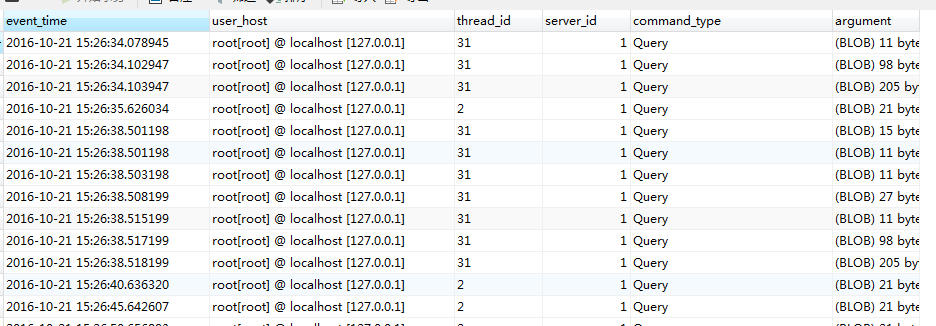
开启general log会将所有到达MySQL Server的SQL语句记录下来。一般不会开启开功能，因为log的量会非常庞大。但个别情况下可能会临时的开一会儿general log以供排障使用。

相关参数一共有3：general\_log、log\_output、general\_log\_file

general\_log：全局动态变量，默认关闭

log\_output ：全局动态变量，可取**FILE、TABLE、NONE**。其中TABLE存储方式比较方便按条件检索。若指定为NONE，则即使general\_log开启了也不会记录log。若log\_output指定为TABLE，则会在mysql数据库下边创建一个general\_log表。需要注意的是该参数不仅仅影响general的存储方式还影响slow的存储方式，这一点需要特别注意。

general\_log\_file：全局动态变量，日志文件名，不指定的话默认为hostname。log，位于数据目录下。

存储 output=’TABLE’的general\_log数据，数据表：

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| event\_time | timestamp(6) | 否 | CURRENT\_TIMESTAMP(6) | 创建时间 |
| user\_host | mediumtext | 否 |  | 主机 |
| thread\_id | bigint(21) | 否 |  | 线程id |
| server\_id | int(10) | 否 |  | 服务器的id |
| command\_type | varchar(64) | 否 |  | 命令 |
| argument | mediumblob | 否 |  | 参数 存储的类似sql语句 通过cvs可以打开看表内容。引擎是csv |

**gtid\_executed 主要是使用mysql gtid复制时间用到**

CREATE TABLE `gtid\_executed` (

`source\_uuid` char(36) NOT NULL COMMENT 'uuid of the source where the transaction was originally executed.',

`interval\_start` bigint(20) NOT NULL COMMENT 'First number of interval.',

`interval\_end` bigint(20) NOT NULL COMMENT 'Last number of interval.',

PRIMARY KEY (`source\_uuid`,`interval\_start`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| source\_uuid *(主键)* | char(36) | 否 |  | uuid of the source where the transaction was originally executed. |
| interval\_start *(主键)* | bigint(20) | 否 |  | First number of interval. |
| interval\_end | bigint(20) | 否 |  | Last number of interval. |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | source\_uuid | 0 | A | 否 |  |
| interval\_start | 0 | A | 否 |

**help\_category**

表注释： help categories

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| help\_category\_id *(主键)* | smallint(5) | 否 |  |  |
| name | char(64) | 否 |  |  |
| parent\_category\_id | smallint(5) | 是 | *NULL* |  |
| url | text | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | help\_category\_id | 40 | A | 否 |  |
| name | BTREE | 是 | 否 | name | 40 | A | 否 |  |

**help\_keyword**

表注释： help keywords

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| help\_keyword\_id *(主键)* | int(10) | 否 |  |  |
| name | char(64) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | help\_keyword\_id | 639 | A | 否 |  |
| name | BTREE | 是 | 否 | name | 639 | A | 否 |  |

**help\_relation**

表注释： keyword-topic relation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| help\_topic\_id *(主键)* | int(10) | 否 |  |  |
| help\_keyword\_id *(主键)* | int(10) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | help\_keyword\_id | 559 | A | 否 |  |
| help\_topic\_id | 1001 | A | 否 |

**help\_topic**

表注释： help topics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| help\_topic\_id *(主键)* | int(10) | 否 |  |  |
| name | char(64) | 否 |  |  |
| help\_category\_id | smallint(5) | 否 |  |  |
| description | text | 否 |  |  |
| example | text | 否 |  |  |
| url | text | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | help\_topic\_id | 832 | A | 否 |  |
| name | BTREE | 是 | 否 | name | 638 | A | 否 |  |

**innodb\_index\_stats**

| **Column name** | **Description** | | | |
| --- | --- | --- | --- | --- |
| database\_name | Database name | | | |
| table\_name | Table name, partition name, or subpartition name | | | |
| index\_name | Index name | | | |
| last\_update | A timestamp indicating the last time that InnoDB updated this row | | | |
| stat\_name | The name of the statistic, whose value is reported in the stat\_value column | | | |
| stat\_value | The value of the statistic that is named in stat\_name column | | | |
| sample\_size | The number of pages sampled for the estimate provided in the stat\_value column | | | |
| stat\_description | Description of the statistic that is named in the stat\_name column | | | |
| **字段** | **类型** | **空** | **默认** | **注释** | |
| database\_name *(主键)* | varchar(64) | 否 |  | 数据库名 | |
| table\_name *(主键)* | varchar(64) | 否 |  | 表名 | |
| index\_name *(主键)* | varchar(64) | 否 |  | 索引名 | |
| last\_update | timestamp | 否 | CURRENT\_TIMESTAMP | 更新时间 | |
| stat\_name *(主键)* | varchar(64) | 否 |  | 统计名称 | |
| stat\_value | bigint(20) | 否 |  | Stat\_name的值 | |
| sample\_size | bigint(20) | 是 | *NULL* | Stat\_value提供的抽样的页数 | |
| stat\_description | varchar(1024) | 否 |  | Stat\_name的描述 | |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | database\_name | 2 | A | 否 |  |
| table\_name | 2 | A | 否 |
| index\_name | 2 | A | 否 |
| stat\_name | 7 | A | 否 |

**innodb\_table\_stats**

| **Column name** | **Description** |
| --- | --- |
| database\_name | Database name |
| table\_name | Table name, partition name, or subpartition name |
| last\_update | A timestamp indicating the last time that InnoDB updated this row |
| n\_rows | The number of rows in the table |
| clustered\_index\_size | The size of the primary index, in pages |
| sum\_of\_other\_index\_sizes | The total size of other (non-primary) indexes, in pages |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| database\_name *(主键)* | varchar(64) | 否 |  | 数据库名 |
| table\_name *(主键)* | varchar(64) | 否 |  | 表名 |
| last\_update | timestamp | 否 | CURRENT\_TIMESTAMP | 更新时间 |
| n\_rows | bigint(20) | 否 |  | 表的总行数 |
| clustered\_index\_size | bigint(20) | 否 |  | 数据页的总数量 （每页 16k　页数×１６K就是这个表所占有的数据长度） |
| sum\_of\_other\_index\_sizes | bigint(20) | 否 |  | 索引页的总数量 (每页 16k　页数×１６K就是这个表所占有的索引长度) |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | database\_name | 2 | A | 否 |  |
| table\_name | 2 | A | 否 |

**ndb\_binlog\_index**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Position | bigint(20) | 否 |  |  |
| File | varchar(255) | 否 |  |  |
| epoch *(主键)* | bigint(20) | 否 |  |  |
| inserts | int(10) | 否 |  |  |
| updates | int(10) | 否 |  |  |
| deletes | int(10) | 否 |  |  |
| schemaops | int(10) | 否 |  |  |
| orig\_server\_id *(主键)* | int(10) | 否 |  |  |
| orig\_epoch *(主键)* | bigint(20) | 否 |  |  |
| gci | int(10) | 否 |  |  |
| next\_position | bigint(20) | 否 |  |  |
| next\_file | varchar(255) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | epoch |  | A | 否 |  |
| orig\_server\_id |  | A | 否 |
| orig\_epoch | 0 | A | 否 |

**plugin**

表注释： MySQL plugins

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| name *(主键)* | varchar(64) | 否 |  |  |
| dl | varchar(128) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | name | 0 | A | 否 |  |

**proc**

表注释： Stored Procedures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| db *(主键)* | char(64) | 否 |  |  |
| name *(主键)* | char(64) | 否 |  |  |
| type *(主键)* | enum('FUNCTION', 'PROCEDURE') | 否 |  |  |
| specific\_name | char(64) | 否 |  |  |
| language | enum('SQL') | 否 | SQL |  |
| sql\_data\_access | enum('CONTAINS\_SQL', 'NO\_SQL', 'READS\_SQL\_DATA', 'MODIFIES\_SQL\_DATA') | 否 | CONTAINS\_SQL |  |
| is\_deterministic | enum('YES', 'NO') | 否 | NO |  |
| security\_type | enum('INVOKER', 'DEFINER') | 否 | DEFINER |  |
| param\_list | blob | 否 |  |  |
| returns | longblob | 否 |  |  |
| body | longblob | 否 |  |  |
| definer | char(93) | 否 |  |  |
| created | timestamp | 否 | CURRENT\_TIMESTAMP |  |
| modified | timestamp | 否 | 0000-00-00 00:00:00 |  |
| sql\_mode | set('REAL\_AS\_FLOAT', 'PIPES\_AS\_CONCAT', 'ANSI\_QUOTES', 'IGNORE\_SPACE', 'NOT\_USED', 'ONLY\_FULL\_GROUP\_BY', 'NO\_UNSIGNED\_SUBTRACTION', 'NO\_DIR\_IN\_CREATE', 'POSTGRESQL', 'ORACLE', 'MSSQL', 'DB2', 'MAXDB', 'NO\_KEY\_OPTIONS', 'NO\_TABLE\_OPTIONS', 'NO\_FIELD\_OPTIONS', 'MYSQL323', 'MYSQL40', 'ANSI', 'NO\_AUTO\_VALUE\_ON\_ZERO', 'NO\_BACKSLASH\_ESCAPES', 'STRICT\_TRANS\_TABLES', 'STRICT\_ALL\_TABLES', 'NO\_ZERO\_IN\_DATE', 'NO\_ZERO\_DATE', 'INVALID\_DATES', 'ERROR\_FOR\_DIVISION\_BY\_ZERO', 'TRADITIONAL', 'NO\_AUTO\_CREATE\_USER', 'HIGH\_NOT\_PRECEDENCE', 'NO\_ENGINE\_SUBSTITUTION', 'PAD\_CHAR\_TO\_FULL\_LENGTH') | 否 |  |  |
| comment | text | 否 |  |  |
| character\_set\_client | char(32) | 是 | *NULL* |  |
| collation\_connection | char(32) | 是 | *NULL* |  |
| db\_collation | char(32) | 是 | *NULL* |  |
| body\_utf8 | longblob | 是 | *NULL* |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | db |  | A | 否 |  |
| name |  | A | 否 |
| type | 48 | A | 否 |

**procs\_priv**

表注释： Procedure privileges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Host *(主键)* | char(60) | 否 |  |  |
| Db *(主键)* | char(64) | 否 |  |  |
| User *(主键)* | char(32) | 否 |  |  |
| Routine\_name *(主键)* | char(64) | 否 |  |  |
| Routine\_type *(主键)* | enum('FUNCTION', 'PROCEDURE') | 否 |  |  |
| Grantor | char(93) | 否 |  |  |
| Proc\_priv | set('Execute', 'Alter Routine', 'Grant') | 否 |  |  |
| Timestamp | timestamp | 否 | CURRENT\_TIMESTAMP |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Host |  | A | 否 |  |
| Db |  | A | 否 |
| User |  | A | 否 |
| Routine\_name |  | A | 否 |
| Routine\_type | 0 | A | 否 |
| Grantor | BTREE | 否 | 否 | Grantor |  | A | 否 |  |

**proxies\_priv**

表注释： User proxy privileges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Host *(主键)* | char(60) | 否 |  |  |
| User *(主键)* | char(32) | 否 |  |  |
| Proxied\_host *(主键)* | char(60) | 否 |  |  |
| Proxied\_user *(主键)* | char(32) | 否 |  |  |
| With\_grant | tinyint(1) | 否 | 0 |  |
| Grantor | char(93) | 否 |  |  |
| Timestamp | timestamp | 否 | CURRENT\_TIMESTAMP |  |

**索引**

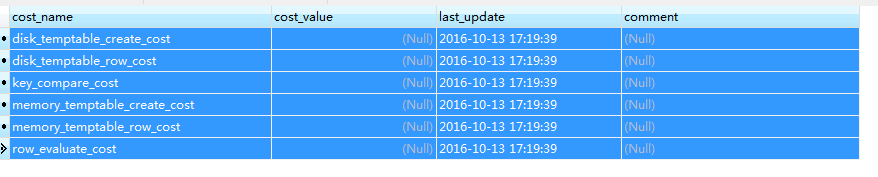
| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Host |  | A | 否 |  |
| User |  | A | 否 |
| Proxied\_host |  | A | 否 |
| Proxied\_user | 1 | A | 否 |
| Grantor | BTREE | 否 | 否 | Grantor |  | A | 否 |  |

**server\_cost**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| cost\_name *(主键)* | varchar(64) | 否 |  |  |
| cost\_value | float | 是 | *NULL* |  |
| last\_update | timestamp | 否 | CURRENT\_TIMESTAMP |  |
| comment | varchar(1024) | 是 | *NULL* |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | cost\_name | 6 | A | 否 |  |

****

* row\_evaluate\_cost (default 0.2)  
  计算符合条件的行的代价，行数越多，此项代价越大
* memory\_temptable\_create\_cost (default 2.0)  
  内存临时表的创建代价
* memory\_temptable\_row\_cost (default 0.2)  
  内存临时表的行代价
* key\_compare\_cost (default 0.1)  
  键比较的代价，例如排序
* disk\_temptable\_create\_cost (default 40.0)  
  内部myisam或innodb临时表的创建代价
* disk\_temptable\_row\_cost (default 1.0)  
  内部myisam或innodb临时表的行代价

由上可以看出创建临时表的代价是很高的，尤其是内部的myisam或innodb临时表。

**servers**

表注释： MySQL Foreign Servers table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Server\_name *(主键)* | char(64) | 否 |  |  |
| Host | char(64) | 否 |  |  |
| Db | char(64) | 否 |  |  |
| Username | char(64) | 否 |  |  |
| Password | char(64) | 否 |  |  |
| Port | int(4) | 否 | 0 |  |
| Socket | char(64) | 否 |  |  |
| Wrapper | char(64) | 否 |  |  |
| Owner | char(64) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Server\_name | 0 | A | 否 |  |

**slave\_master\_info**

表注释： Master Information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Number\_of\_lines | int(10) | 否 |  | Number of lines in the file. |
| Master\_log\_name | text | 否 |  | The name of the master binary log currently being read from the master. |
| Master\_log\_pos | bigint(20) | 否 |  | The master log position of the last read event. |
| Host | char(64) | 是 | *NULL* | The host name of the master. |
| User\_name | text | 是 | *NULL* | The user name used to connect to the master. |
| User\_password | text | 是 | *NULL* | The password used to connect to the master. |
| Port | int(10) | 否 |  | The network port used to connect to the master. |
| Connect\_retry | int(10) | 否 |  | The period (in seconds) that the slave will wait before trying to reconnect to the master. |
| Enabled\_ssl | tinyint(1) | 否 |  | Indicates whether the server supports SSL connections. |
| Ssl\_ca | text | 是 | *NULL* | The file used for the Certificate Authority (CA) certificate. |
| Ssl\_capath | text | 是 | *NULL* | The path to the Certificate Authority (CA) certificates. |
| Ssl\_cert | text | 是 | *NULL* | The name of the SSL certificate file. |
| Ssl\_cipher | text | 是 | *NULL* | The name of the cipher in use for the SSL connection. |
| Ssl\_key | text | 是 | *NULL* | The name of the SSL key file. |
| Ssl\_verify\_server\_cert | tinyint(1) | 否 |  | Whether to verify the server certificate. |
| Heartbeat | float | 否 |  |  |
| Bind | text | 是 | *NULL* | Displays which interface is employed when connecting to the MySQL server |
| Ignored\_server\_ids | text | 是 | *NULL* | The number of server IDs to be ignored, followed by the actual server IDs |
| Uuid | text | 是 | *NULL* | The master server uuid. |
| Retry\_count | bigint(20) | 否 |  | Number of reconnect attempts, to the master, before giving up. |
| Ssl\_crl | text | 是 | *NULL* | The file used for the Certificate Revocation List (CRL) |
| Ssl\_crlpath | text | 是 | *NULL* | The path used for Certificate Revocation List (CRL) files |
| Enabled\_auto\_position | tinyint(1) | 否 |  | Indicates whether GTIDs will be used to retrieve events from the master. |
| Channel\_name *(主键)* | char(64) | 否 |  | The channel on which the slave is connected to a source. Used in Multisource Replication |
| Tls\_version | text | 是 | *NULL* | Tls version |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Channel\_name | 0 | A | 否 |  |

**slave\_relay\_log\_info**

表注释： Relay Log Information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Number\_of\_lines | int(10) | 否 |  | Number of lines in the file or rows in the table. Used to version table definitions. |
| Relay\_log\_name | text | 否 |  | The name of the current relay log file. |
| Relay\_log\_pos | bigint(20) | 否 |  | The relay log position of the last executed event. |
| Master\_log\_name | text | 否 |  | The name of the master binary log file from which the events in the relay log file were read. |
| Master\_log\_pos | bigint(20) | 否 |  | The master log position of the last executed event. |
| Sql\_delay | int(11) | 否 |  | The number of seconds that the slave must lag behind the master. |
| Number\_of\_workers | int(10) | 否 |  |  |
| Id | int(10) | 否 |  | Internal Id that uniquely identifies this record. |
| Channel\_name *(主键)* | char(64) | 否 |  | The channel on which the slave is connected to a source. Used in Multisource Replication |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Channel\_name | 0 | A | 否 |  |

**slave\_worker\_info**

表注释： Worker Information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Id *(主键)* | int(10) | 否 |  |  |
| Relay\_log\_name | text | 否 |  |  |
| Relay\_log\_pos | bigint(20) | 否 |  |  |
| Master\_log\_name | text | 否 |  |  |
| Master\_log\_pos | bigint(20) | 否 |  |  |
| Checkpoint\_relay\_log\_name | text | 否 |  |  |
| Checkpoint\_relay\_log\_pos | bigint(20) | 否 |  |  |
| Checkpoint\_master\_log\_name | text | 否 |  |  |
| Checkpoint\_master\_log\_pos | bigint(20) | 否 |  |  |
| Checkpoint\_seqno | int(10) | 否 |  |  |
| Checkpoint\_group\_size | int(10) | 否 |  |  |
| Checkpoint\_group\_bitmap | blob | 否 |  |  |
| Channel\_name *(主键)* | char(64) | 否 |  | The channel on which the slave is connected to a source. Used in Multisource Replication |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Channel\_name | 0 | A | 否 |  |
| Id | 0 | A | 否 |

**slow\_log**

表注释： Slow log

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| start\_time | timestamp(6) | 否 | CURRENT\_TIMESTAMP(6) |  |
| user\_host | mediumtext | 否 |  |  |
| query\_time | time(6) | 否 |  |  |
| lock\_time | time(6) | 否 |  |  |
| rows\_sent | int(11) | 否 |  |  |
| rows\_examined | int(11) | 否 |  |  |
| db | varchar(512) | 否 |  |  |
| last\_insert\_id | int(11) | 否 |  |  |
| insert\_id | int(11) | 否 |  |  |
| server\_id | int(10) | 否 |  |  |
| sql\_text | mediumblob | 否 |  |  |
| thread\_id | bigint(21) | 否 |  |  |

**tables\_priv**

表注释： Table privileges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Host *(主键)* | char(60) | 否 |  |  |
| Db *(主键)* | char(64) | 否 |  |  |
| User *(主键)* | char(32) | 否 |  |  |
| Table\_name *(主键)* | char(64) | 否 |  |  |
| Grantor | char(93) | 否 |  |  |
| Timestamp | timestamp | 否 | CURRENT\_TIMESTAMP |  |
| Table\_priv | set('Select', 'Insert', 'Update', 'Delete', 'Create', 'Drop', 'Grant', 'References', 'Index', 'Alter', 'Create View', 'Show view', 'Trigger') | 否 |  |  |
| Column\_priv | set('Select', 'Insert', 'Update', 'References') | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Host |  | A | 否 |  |
| Db |  | A | 否 |
| User |  | A | 否 |
| Table\_name | 1 | A | 否 |
| Grantor | BTREE | 否 | 否 | Grantor |  | A | 否 |  |

**time\_zone**

表注释： Time zones

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Time\_zone\_id *(主键)* | int(10) | 否 |  |  |
| Use\_leap\_seconds | enum('Y', 'N') | 否 | N |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Time\_zone\_id | 0 | A | 否 |  |

**time\_zone\_leap\_second**

表注释： Leap seconds information for time zones

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Transition\_time *(主键)* | bigint(20) | 否 |  |  |
| Correction | int(11) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Transition\_time | 0 | A | 否 |  |

**time\_zone\_name**

表注释： Time zone names

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Name *(主键)* | char(64) | 否 |  |  |
| Time\_zone\_id | int(10) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Name | 0 | A | 否 |  |

**time\_zone\_transition**

表注释： Time zone transitions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Time\_zone\_id *(主键)* | int(10) | 否 |  |  |
| Transition\_time *(主键)* | bigint(20) | 否 |  |  |
| Transition\_type\_id | int(10) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Time\_zone\_id | 0 | A | 否 |  |
| Transition\_time | 0 | A | 否 |

**time\_zone\_transition\_type**

表注释： Time zone transition types

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Time\_zone\_id *(主键)* | int(10) | 否 |  |  |
| Transition\_type\_id *(主键)* | int(10) | 否 |  |  |
| Offset | int(11) | 否 | 0 |  |
| Is\_DST | tinyint(3) | 否 | 0 |  |
| Abbreviation | char(8) | 否 |  |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Time\_zone\_id | 0 | A | 否 |  |
| Transition\_type\_id | 0 | A | 否 |

**user**

表注释： Users and global privileges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **字段** | **类型** | **空** | **默认** | **注释** |
| Host *(主键)* | char(60) | 否 |  |  |
| User *(主键)* | char(32) | 否 |  |  |
| Select\_priv | enum('N', 'Y') | 否 | N |  |
| Insert\_priv | enum('N', 'Y') | 否 | N |  |
| Update\_priv | enum('N', 'Y') | 否 | N |  |
| Delete\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_priv | enum('N', 'Y') | 否 | N |  |
| Drop\_priv | enum('N', 'Y') | 否 | N |  |
| Reload\_priv | enum('N', 'Y') | 否 | N |  |
| Shutdown\_priv | enum('N', 'Y') | 否 | N |  |
| Process\_priv | enum('N', 'Y') | 否 | N |  |
| File\_priv | enum('N', 'Y') | 否 | N |  |
| Grant\_priv | enum('N', 'Y') | 否 | N |  |
| References\_priv | enum('N', 'Y') | 否 | N |  |
| Index\_priv | enum('N', 'Y') | 否 | N |  |
| Alter\_priv | enum('N', 'Y') | 否 | N |  |
| Show\_db\_priv | enum('N', 'Y') | 否 | N |  |
| Super\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_tmp\_table\_priv | enum('N', 'Y') | 否 | N |  |
| Lock\_tables\_priv | enum('N', 'Y') | 否 | N |  |
| Execute\_priv | enum('N', 'Y') | 否 | N |  |
| Repl\_slave\_priv | enum('N', 'Y') | 否 | N |  |
| Repl\_client\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_view\_priv | enum('N', 'Y') | 否 | N |  |
| Show\_view\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_routine\_priv | enum('N', 'Y') | 否 | N |  |
| Alter\_routine\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_user\_priv | enum('N', 'Y') | 否 | N |  |
| Event\_priv | enum('N', 'Y') | 否 | N |  |
| Trigger\_priv | enum('N', 'Y') | 否 | N |  |
| Create\_tablespace\_priv | enum('N', 'Y') | 否 | N |  |
| ssl\_type | enum('', 'ANY', 'X509', 'SPECIFIED') | 否 |  |  |
| ssl\_cipher | blob | 否 |  |  |
| x509\_issuer | blob | 否 |  |  |
| x509\_subject | blob | 否 |  |  |
| max\_questions | int(11) | 否 | 0 |  |
| max\_updates | int(11) | 否 | 0 |  |
| max\_connections | int(11) | 否 | 0 |  |
| max\_user\_connections | int(11) | 否 | 0 |  |
| plugin | char(64) | 否 | mysql\_native\_password |  |
| authentication\_string | text | 是 | *NULL* |  |
| password\_expired | enum('N', 'Y') | 否 | N |  |
| password\_last\_changed | timestamp | 是 | *NULL* |  |
| password\_lifetime | smallint(5) | 是 | *NULL* |  |
| account\_locked | enum('N', 'Y') | 否 | N |  |

**索引**

| **键名** | **类型** | **唯一** | **紧凑** | **字段** | **基数** | **排序规则** | **空** | **注释** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PRIMARY | BTREE | 是 | 否 | Host |  | A | 否 |  |
| User | 2 | A | 否 |