



MariaDB: Primary Keys

This MariaDB tutorial explains how to **create and drop a primary key** in MariaDB with syntax and examples.

What is a primary key in MariaDB?

In MariaDB, a primary key is a single field or combination of fields that uniquely defines a record. None of the fields that are part of the primary key can contain a NULL value. A table can have only one primary key.

A primary key is created in MariaDB using either a CREATE TABLE statement or an ALTER TABLE statement.

Create Primary Key - Using CREATE TABLE statement

You can create a primary key in MariaDB with the CREATE TABLE statement.

Syntax

The syntax to create a primary key using the [CREATE TABLE statement](#) in MariaDB is:

```
CREATE TABLE table_name
(
    column1 column_definition,
    column2 column_definition,
    ...

    CONSTRAINT [constraint_name]
        PRIMARY KEY [ USING BTREE | HASH ] (column1, column2, ... column_n)
);
```

table_name

The name of the table that you wish to create.

column1, column2

The columns that you wish to create in the table. See the MariaDB [CREATE TABLE statement](#) for more detailed CREATE TABLE syntax as this is an over-simplification to demonstrate how to create a Primary Key.

constraint_name

The name of the primary key.

column1, column2, ... column_n

The columns that make up the primary key.

Example

Let's look at an example of how to create a primary key using the CREATE TABLE statement in MariaDB.

```
CREATE TABLE websites
( website_id INT(11) NOT NULL AUTO_INCREMENT,
  website_name VARCHAR(25) NOT NULL,
  server_name VARCHAR(20),
  creation_date DATE,
  CONSTRAINT websites_pk PRIMARY KEY (website_id)
);
```

In this example, we've created a primary key on the *websites* table called *websites_pk*. It consists of only one column - the *website_id* column.

We could also create a primary key with more than one field as in the example below:

```
CREATE TABLE websites
( website_name VARCHAR(25) NOT NULL,
  server_name VARCHAR(20),
  creation_date DATE,
  CONSTRAINT websites_pk PRIMARY KEY (website_name, server_name)
);
```

This example creates a primary key called *websites_pk* that is made up of a combination of the *website_name* and *server_name* columns. So each combination of *website_name* and *server_name* must be unique in the *websites* table.

Create Primary Key - Using ALTER TABLE statement

You can create a primary key in MariaDB with the ALTER TABLE statement.

Syntax

The syntax to create a primary key using the ALTER TABLE statement in MariaDB is:

```
ALTER TABLE table_name
  ADD CONSTRAINT [ constraint_name ]
    PRIMARY KEY [ USING BTREE | HASH ] (column1, column2, ... column_n)
```

table_name

The name of the table to modify.

constraint_name

The name of the primary key.

column1, column2, ... column_n

The columns that make up the primary key.

Example

Let's look at an example of how to create a primary key using the ALTER TABLE statement in MariaDB.

```
ALTER TABLE websites
ADD CONSTRAINT websites_pk
PRIMARY KEY (website_id);
```

In this example, we've created a primary key on the existing *websites* table called *websites_pk*. It consists of the *website_id* column.

We could also create a primary key with more than one field as in the example below:

```
ALTER TABLE websites
ADD CONSTRAINT websites_pk
PRIMARY KEY (website_name, server_name);
```

This example we've created a primary key called *websites_pk* that is made up of a combination of the *website_name* and *server_name* columns.

Drop Primary Key

You can drop a primary key in MariaDB using the ALTER TABLE statement.

Syntax

The syntax to drop a primary key in MariaDB is:

```
ALTER TABLE table_name
DROP PRIMARY KEY;
```

table_name

The name of the table to modify.

Example

Let's look at an example of how to drop a primary key using the ALTER TABLE statement in MariaDB.

```
ALTER TABLE websites  
DROP PRIMARY KEY;
```

In this example, we've dropped the primary key on the *websites* table. We do not need to specify the name of the primary key as there can only be one on a table.

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