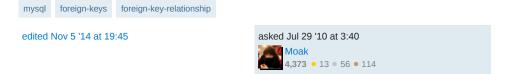# How to change the foreign key referential action? (behavior)

I have set up a table that contains a column with a foreign key, set to `ON DELETE CASCADE` (delete child when parent is deleted)

What would the SQL command be to change this to `ON DELETE RESTRICT` ? (can't delete parent if it has children)

mysql   foreign-keys   foreign-key-relationship

edited Nov 5 '14 at 19:45   asked Jul 29 '10 at 3:40

                                             Moak
                                             4,373 ● 13 ● 56 ● 114

3 Answers

Old question but adding answer so that one can get help

Its two step process:

Suppose, a `table1` has a *foreign key* with column name `fk_table2_id` , with *constraint* name `fk_name` and `table2` is referred table with key `t2` (*something like below in my diagram*).

```
table1 [ fk_table2_id ] --> table2 [t2]
```

First step, DROP old CONSTRAINT: (reference)

```
ALTER TABLE `table1`
DROP FOREIGN KEY `fk_name`;
```

notice constraint is deleted, column is not deleted

Second step, ADD new CONSTRAINT:

```
ALTER TABLE `table1`
ADD CONSTRAINT `fk_name`
    FOREIGN KEY (`fk_table2_id`) REFERENCES `table2` (`t2`) ON DELETE CASCADE;
```

adding constraint, column is already there

Example:

I have a `UserDetails` table refers to `Users` table:

```
mysql> SHOW CREATE TABLE UserDetails;
:
:
  `User_id` int(11) DEFAULT NULL,
  PRIMARY KEY (`Detail_id`),
  KEY `FK_User_id` (`User_id`),
  CONSTRAINT `FK_User_id` FOREIGN KEY (`User_id`) REFERENCES `Users` (`User_id`)
:
:
```

First step:

```
mysql> ALTER TABLE `UserDetails` DROP FOREIGN KEY `FK_User_id`;
Query OK, 1 row affected (0.07 sec)
```

Second step:

```
mysql> ALTER TABLE `UserDetails` ADD CONSTRAINT `FK_User_id`
    -> FOREIGN KEY (`User_id`) REFERENCES `Users` (`User_id`) ON DELETE CASCADE;
Query OK, 1 row affected (0.02 sec)
```

result:

```
mysql> SHOW CREATE TABLE UserDetails;
:
:
`User_id` int(11) DEFAULT NULL,
  PRIMARY KEY (`Detail_id`),
  KEY `FK_User_id` (`User_id`),
  CONSTRAINT `FK_User_id` FOREIGN KEY (`User_id`) REFERENCES
                                   `Users` (`User_id`) ON DELETE CASCADE
:
```

edited Jun 30 '13 at 5:59   answered Jan 17 '13 at 14:26

                                                      Grijesh Chauhan
                                                      30.3k ● 6 ● 53 ● 97

1   Thanks, old question but you are right, the other answer was a bit cryptic for me back in the day. –
     Moak Jan 20 '13 at 3:57

     thanks to you too :) – Grijesh Chauhan Jan 20 '13 at 11:27

You can do this in one query **if** you're willing to change its name:

```
ALTER TABLE table_name
  DROP FOREIGN KEY `fk_name`,
  ADD CONSTRAINT `fk_name2` FOREIGN KEY (`remote_id`)
    REFERENCES `other_table` (`id`)
    ON DELETE CASCADE;
```

This is useful to minimize downtime if you have a large table.

answered Sep 17 '13 at 13:00

     Romuald Brunet
     1,227 ● 9 ● 15

```
ALTER TABLE DROP FOREIGN KEY fk_name;
ALTER TABLE ADD FOREIGN KEY fk_name(fk_cols)
           REFERENCES tbl_name(pk_names) ON CASCADE RESTRICT;
```

answered Jul 29 '10 at 3:55

     pascal
     1,965 ● 7 ● 12

     fk_name is the column name? – Moak Jul 29 '10 at 7:02

2   helped me find the solution `ALTER TABLE table_name ADD` ... `ON DELETE RESTRICT` – Moak Jul
     29 '10 at 7:13

2   No, fk_name is the constraint name. It's optional to provide one. I'm not sure but maybe you can retrieve it
     using `SHOW CREATE TABLE` . – pascal Jul 29 '10 at 7:16