

Please visit website: <http://cxyroad.com>

```
NT;
DECLARE batch_size INT DEFAULT 500;
DECLARE insert_values TEXT;

SET end_idx = LEAST(total, start_idx + batch_size - 1);

WHILE start_idx <= total DO
    SET insert_values = '';
    WHILE start_idx <= end_idx DO
        SET insert_values = CONCAT(insert_values, CONCAT('('name',
start_idx, '\', 0, 0, 0, NOW(), NOW()),'));
        SET start_idx = start_idx + 1;
    END WHILE;
    SET insert_values = LEFT(insert_values, LENGTH(insert_values) -
1); -- Remove the trailing comma
    SET @sql = CONCAT('INSERT INTO category_info_varchar_50
(name, is_show, sort, deleted, create_time, update_time) VALUES ',
insert_values, ',');

    PREPARE stmt FROM @sql;
    EXECUTE stmt;
    SET @sql = CONCAT('INSERT INTO category_info_varchar_500
(name, is_show, sort, deleted, create_time, update_time) VALUES ',
insert_values, ',');
    PREPARE stmt FROM @sql;
    EXECUTE stmt;

    SET end_idx = LEAST(total, start_idx + batch_size - 1);
END WHILE;
END$$
DELIMITER ;

CALL batchInsertData(1000000);
...
```

3.验证存储空间

查询第一张表SQL

```
...
SELECT
```

```

table_schema AS "数据库",
table_name AS "表名",
table_rows AS "记录数",
TRUNCATE ( data_length / 1024 / 1024, 2 ) AS "数据容量 (MB) ",
TRUNCATE ( index_length / 1024 / 1024, 2 ) AS "索引容量 (MB) "
FROM
information_schema.TABLES
WHERE
table_schema = 'test_mysql_field'
and TABLE_NAME = 'category_info_varchar_50'
ORDER BY
data_length DESC,
index_length DESC;

```

...

查询结果

![image.png](https://p9-juejin.byteimg.com/tos-cn-i-k3u1fbpfcp/93f0f060147544419108c0988e25d7db~tplv-k3u1fbpfcp-jj-mark:3024:0:0:0:q75.awebp#?w=563&h=82&s=6982&e=png&b=fbfafa)

查询第二张表SQL

...

```

SELECT
table_schema AS "数据库",
table_name 1444d74b6edf932ba5f1be8~tplv-k3u1fbpfcp-jj-mark:3024:0:0:0:q75.awebp#?w=755&h=571&s=24875&e=png&b=fefefe)
我发现86%的时花在数据传输上,接下来我们看状态部分
,Created\_tmp\_files和sort\_merge\_passes
![1711426760865.jpg](https://p6-juejin.byteimg.com/tos-cn-i-k3u1fbpfcp/262a0c9de1fd4ebcb4f0300e97f773b2~tplv-k3u1fbpfcp-jj-mark:3024:0:0:0:q75.awebp#?w=923&h=607&s=51562&e=png&b=fdcfcc)

```

![image.png](https://p3-juejin.byteimg.com/tos-cn-i-k3u1fbpfcp/615a8e241a21457bad26b5b5ad152a39~tplv-k3u1fbpfcp-jj-mark:3024:0:0:0:q75.awebp#?w=936&h=607&s=75420&e=png&b=fdcfcc)

Created_tmp_files为3

sort_merge_passes为95

varchar500 全表执行sql分析

![image.png](https://p9-juejin.byteimg.com/tos-cn-i-k3u1fbpfcp/96492fca287b4a159a610409feb80bc8~tplv-k3u1fbpfcp-jj-mark:3024:0:0:0:q75.awebp#?w=443&h=543&s=33238&e=png&b=fdcfcc)

增加了临时表排序

![image.png](https://p3-juejin.byteimg.com/tos-cn-i-k3u1fbpfcp/60f92612434d432fab10851cd748634c~tplv-k3u1fbpfcp-jj-mark:3024:0:0:0:q75.awebp#?w=918&h=605&s=71446&e=png&b=fdcfcc)
![image.png](https://p9-juejin.byteimg.com/tos-cn-i-k3u1fbpfcp/5b1f340b59f24d1a9eb979b2b2a3ab78~tplv-k3u1fbpfcp-jj-mark:3024:0:0:0:q75.awebp#?w=912&h=613&s=74515&e=png&b=fdcfcc)
Created_tmp_files 为 4

sort_merge_passes为645

关于sort_merge_passes, Mysql给出了如下描述:

> Number of merge passes that the sort algorithm has had to do. If this value is large, you may want to increase the value of the sort_buffer_size.

其实sort_merge_passes对应的就是MySQL做归并排序的次数, 也就是说, 如果sort_merge_passes值比较大, 说明sort_buffer和要排序的数据差距越大, 我们可以通过增大sort_buffer_size或者让填入sort_buffer_size的键值对更小来缓解sort_merge_passes归并排序的次数。

四.最终结论

至此,我们不难发现,当我们对该字段进行排序操作的时候,Mysql会根据该字段的设计的长度进行内存预估, 如果设计过大的可变长度, 会导致内存预估的值超出sort_buffer_size的大小, 导致mysql采用磁盘临时文件排序,最终影响查询性能;

原文链接: <https://juejin.cn/post/7350228838151847976>

