

## 报表SQL慢查询101902

```
mysql> explain select distinct      t.LIST_ID, t.POLICY_ID, t.ITEM_ID, t.PRODUCT_ID, t.FEE_TYPE, t.POLICY_YEAR, t.AGENT_ID,
t.CHANNEL_ID,      t.PARTNER_ID, t.FACTOR_TYPE, t.FACTOR_ID, t.FACTOR_VALUE, t.STATUS, t.BUSINESS_TYPE, t.BUSINESS_DATE,
t.CREATE_BY, t.CREATE_TIME, t.UPDATE_BY, t.UPDATE_TIME      from t_chl_policy_factor t,      t_chl_policy a
where t.STATUS = '01'      and t.POLICY_ID = a.POLICY_ID      and t.FACTOR_TYPE = '101004'      AND
NOT exists ( select 1 from t_chl_comm_policy_detail e, t_chl_comm_settle f      where e.POLICY_ID = t.POLICY_ID and e.SETTLE_ID
= f.SETTLE_ID and f.STATUS = '03'      AND f.settle_type='01' )      and DATE_FORMAT(a.ISSUE_DATE, '%Y-%m') <=
'2017-08'      AND a.ISSUE_DATE >= date_add('2017-08-31', interval - '180' day)      and
a.ISSUE_DATE >= '2017-07-01'      and a.DELIVERY_DATE <= '2017-09-05'      and
a.DELIVERY_CLOSE_DATE <= '2017-09-05'      and a.CALLBACK_DATE <= '2017-09-20'      AND t.AGENT_ID
IN (SELECT DISTINCT d.agent_id FROM      v_chl_org_ins_leader b,
v_chl_org_insurance c,      v_agent_channel_change d      WHERE
c.`PARENT_PATH` LIKE CONCAT('%_', b.`CHANNEL_ID`, '_%')      AND c.CHANNEL_ID = d.`CHANNEL_ID`
AND DATE_FORMAT(b.END_DATE, '%Y-%m') >= '2017-08'      AND DATE_FORMAT(b.START_DATE, '%Y-
%m') <= '2017-08'      AND DATE_FORMAT(d.END_DATE, '%Y-%m') >= '2017-08'
AND DATE_FORMAT(d.START_DATE, '%Y-%m') <= '2017-08'      AND b.`LEADER_ID`= 1214072
AND d.agent_id <> 1214072      )\G;
***** 1. row *****
      id: 1
select_type: PRIMARY
      table: t_chl_org_ins_leader
partitions: NULL
      type: ref
possible_keys: idx_chl_org_ins_leader__lead_id
      key: idx_chl_org_ins_leader__lead_id
key_len: 9
      ref: const
      rows: 1
filtered: 100.00
      Extra: Using where; Using temporary; Start temporary
***** 2. row *****
      id: 1
select_type: PRIMARY
      table: a
partitions: NULL
      type: ALL
possible_keys: idx_chl_policy__policy_id
      key: NULL
key_len: NULL
      ref: NULL
      rows: 36742
filtered: 0.41
      Extra: Using where; Using join buffer (Block Nested Loop)
***** 3. row *****
      id: 1
select_type: PRIMARY
      table: t
partitions: NULL
      type: ref
possible_keys: idx_chl_policy_factor__policy_id
      key: idx_chl_policy_factor__policy_id
key_len: 122
      ref: wift_ccms.a.POLICY_ID
      rows: 9
filtered: 1.00
      Extra: Using where
```

```
***** 4. row *****
      id: 1
select_type: PRIMARY
      table: t_agent_channel_change
partitions: NULL
      type: ALL
possible_keys: idx_agt_chl_chg__chl_id,idx_agt_chl_chg__agt_id
      key: NULL
key_len: NULL
      ref: NULL
      rows: 1925
filtered: 9.00
      Extra: Using where; Distinct; Using join buffer (Block Nested Loop)
```

```
***** 5. row *****
      id: 1
select_type: PRIMARY
      table: t_chl_org_insurance
partitions: NULL
      type: eq_ref
possible_keys: PRIMARY
      key: PRIMARY
key_len: 8
      ref: wift_iws.t_agent_channel_change.CHANNEL_ID
      rows: 1
filtered: 11.11
      Extra: Using where; Distinct; End temporary
```

```
***** 6. row *****
      id: 2
select_type: DEPENDENT SUBQUERY
      table: f
partitions: NULL
      type: ALL
possible_keys: PRIMARY
      key: NULL
key_len: NULL
      ref: NULL
      rows: 18
filtered: 5.56
      Extra: Using where
```

```
***** 7. row *****
      id: 2
select_type: DEPENDENT SUBQUERY
      table: e
partitions: NULL
      type: ref
possible_keys: I_CHL_COMM_PO_DETAIL__POL_SET_ID
      key: I_CHL_COMM_PO_DETAIL__POL_SET_ID
key_len: 245
      ref: wift_ccms.f.SETTLE_ID,wift_ccms.t.POLICY_ID
      rows: 3
filtered: 100.00
      Extra: Using index
```

7 rows in set, 6 warnings (0.01 sec)

ERROR:

No query specified

mysql>

```
mysql> show warnings\G;
```

```
***** 1. row *****
```

```
Level: Note
```

```
Code: 1276
```

```
Message: Field or reference 'wift_ccms.t.POLICY_ID' of SELECT #2 was resolved in SELECT #1
```

```
***** 2. row *****
```

```
Level: Warning
```

```
Code: 1739
```

```
Message: Cannot use ref access on index 'idx_agt_chl_chg_agt_id' due to type or collation conversion on field 'AGENT_ID'
```

```
***** 3. row *****
```

```
Level: Warning
```

```
Code: 1739
```

```
Message: Cannot use range access on index 'idx_agt_chl_chg_agt_id' due to type or collation conversion on field 'AGENT_ID'
```

```
***** 4. row *****
```

```
Level: Warning
```

```
Code: 1739
```

```
Message: Cannot use range access on index 'idx_agt_chl_chg_agt_id' due to type or collation conversion on field 'AGENT_ID'
```

```
***** 5. row *****
```

```
Level: Warning
```

```
Code: 1739
```

```
Message: Cannot use range access on index 'idx_agt_chl_chg_agt_id' due to type or collation conversion on field 'AGENT_ID'
```

```
***** 6. row *****
```

```
Level: Note
```

```
Code: 1003
```

```
Message: /* select#1 */ select distinct `wift_ccms`.`t`.`LIST_ID` AS `LIST_ID`,`wift_ccms`.`t`.`POLICY_ID` AS  
`POLICY_ID`,`wift_ccms`.`t`.`ITEM_ID` AS `ITEM_ID`,`wift_ccms`.`t`.`PRODUCT_ID` AS `PRODUCT_ID`,`wift_ccms`.`t`.`FEE_TYPE` AS  
`FEE_TYPE`,`wift_ccms`.`t`.`POLICY_YEAR` AS `POLICY_YEAR`,`wift_ccms`.`t`.`AGENT_ID` AS `AGENT_ID`,`wift_ccms`.`t`.`CHANNEL_ID`  
AS `CHANNEL_ID`,`wift_ccms`.`t`.`PARTNER_ID` AS `PARTNER_ID`,`wift_ccms`.`t`.`FACTOR_TYPE` AS  
`FACTOR_TYPE`,`wift_ccms`.`t`.`FACTOR_ID` AS `FACTOR_ID`,`wift_ccms`.`t`.`FACTOR_VALUE` AS  
`FACTOR_VALUE`,`wift_ccms`.`t`.`STATUS` AS `STATUS`,`wift_ccms`.`t`.`BUSINESS_TYPE` AS  
`BUSINESS_TYPE`,`wift_ccms`.`t`.`BUSINESS_DATE` AS `BUSINESS_DATE`,`wift_ccms`.`t`.`CREATE_BY` AS  
`CREATE_BY`,`wift_ccms`.`t`.`CREATE_TIME` AS `CREATE_TIME`,`wift_ccms`.`t`.`UPDATE_BY` AS  
`UPDATE_BY`,`wift_ccms`.`t`.`UPDATE_TIME` AS `UPDATE_TIME` from `wift_ccms`.`t_chl_policy_factor` `t` semi join  
(`wift_iivs`.`t_chl_org_ins_leader` join `wift_iivs`.`t_chl_org_insurance` join `wift_iivs`.`t_agent_channel_change`) join  
`wift_ccms`.`t_chl_policy` `a` where ((`wift_iivs`.`t_chl_org_ins_leader`.`LEADER_ID` = 1214072) and  
(`wift_iivs`.`t_chl_org_insurance`.`CHANNEL_ID` = `wift_iivs`.`t_agent_channel_change`.`CHANNEL_ID`) and  
(`wift_ccms`.`t`.`POLICY_ID` = `wift_ccms`.`a`.`POLICY_ID`) and (`wift_ccms`.`t`.`STATUS` = '01') and  
(`wift_ccms`.`t`.`FACTOR_TYPE` = '101004') and (not(exists(/* select#2 */ select 1 from `wift_ccms`.`t_chl_comm_policy_detail`  
`e` join `wift_ccms`.`t_chl_comm_settle` `f` where ((`wift_ccms`.`e`.`SETTLE_ID` = `wift_ccms`.`f`.`SETTLE_ID`) and  
(`wift_ccms`.`e`.`POLICY_ID` = `wift_ccms`.`t`.`POLICY_ID`) and (`wift_ccms`.`f`.`STATUS` = '03') and  
(`wift_ccms`.`f`.`SETTLE_TYPE` = '01'))))) and (date_format(`wift_ccms`.`a`.`ISSUE_DATE`,`%Y-%m`) <= '2017-08') and  
(`wift_ccms`.`a`.`ISSUE_DATE` >= <cache>(('2017-08-31' + interval -(180) day))) and (`wift_ccms`.`a`.`ISSUE_DATE` >= '2017-07-  
01') and (`wift_ccms`.`a`.`DELIVERY_DATE` <= '2017-09-05') and (`wift_ccms`.`a`.`DELIVERY_CLOSE_DATE` <= '2017-09-05') and  
(`wift_ccms`.`a`.`CALLBACK_DATE` <= '2017-09-20') and (`wift_iivs`.`t_chl_org_insurance`.`PARENT_PATH` like  
concat('%',`wift_iivs`.`t_chl_org_ins_leader`.`CHANNEL_ID`,`%`)) and  
(date_format(`wift_iivs`.`t_chl_org_ins_leader`.`END_DATE`,`%Y-%m`) >= '2017-08') and  
(date_format(`wift_iivs`.`t_chl_org_ins_leader`.`START_DATE`,`%Y-%m`) <= '2017-08') and  
(date_format(`wift_iivs`.`t_agent_channel_change`.`END_DATE`,`%Y-%m`) >= '2017-08') and  
(date_format(`wift_iivs`.`t_agent_channel_change`.`START_DATE`,`%Y-%m`) <= '2017-08') and  
(`wift_iivs`.`t_agent_channel_change`.`AGENT_ID` <> 1214072) and (`wift_ccms`.`t`.`AGENT_ID` =  
`wift_iivs`.`t_agent_channel_change`.`AGENT_ID`))
```

```
6 rows in set (0.00 sec)
```

```
ERROR:
```

```
No query specified
```

```
mysql>
```

```

select distinct
  t.LIST_ID, t.POLICY_ID, t.ITEM_ID, t.PRODUCT_ID, t.FEE_TYPE, t.POLICY_YEAR, t.AGENT_ID, t.CHANNEL_ID,
  t.PARTNER_ID, t.FACTOR_TYPE, t.FACTOR_ID, t.FACTOR_VALUE, t.STATUS, t.BUSINESS_TYPE, t.BUSINESS_DATE,
  t.CREATE_BY, t.CREATE_TIME, t.UPDATE_BY, t.UPDATE_TIME
  from t_chl_policy_factor t,
       t_chl_policy a
  where t.STATUS = '01'
        and t.POLICY_ID = a.POLICY_ID
        and t.FACTOR_TYPE = '101004'

AND NOT exists ( select 1 from t_chl_comm_policy_detail e,t_chl_comm_settle f
where e.POLICY_ID = t.POLICY_ID and e.SETTLE_ID = f.SETTLE_ID and f.STATUS = '03'
AND f.settle_type='01' )
  and DATE_FORMAT(a.ISSUE_DATE,'%Y-%m') <= '2017-08'
        AND a.ISSUE_DATE >= date_add('2017-08-31',interval - '180' day)
        and a.ISSUE_DATE >= '2017-07-01'
        and a.DELIVERY_DATE <= '2017-09-05'
        and a.DELIVERY_CLOSE_DATE <= '2017-09-05'
        and a.CALLBACK_DATE <= '2017-09-20'
AND t.AGENT_ID IN (SELECT DISTINCT d.agent_id FROM
                   v_chl_org_ins_leader b,
                   v_chl_org_insurance c,
                   v_agent_channel_change d
                   WHERE c.`PARENT_PATH` LIKE CONCAT('%_',b.`CHANNEL_ID`,`_%`)
                   AND c.CHANNEL_ID = d.`CHANNEL_ID`
                   AND DATE_FORMAT(b.END_DATE,'%Y-%m') >= '2017-08'
                   AND DATE_FORMAT(b.START_DATE,'%Y-%m') <= '2017-08'
                   AND DATE_FORMAT(d.END_DATE,'%Y-%m') >= '2017-08'
                   AND DATE_FORMAT(d.START_DATE,'%Y-%m') <= '2017-08'
                   AND b.`LEADER_ID`= 1214072
                   AND d.agent_id <> 1214072
                   );

```

```

t_chl_policy_factor t,
status列只有两个值01, 02。但是定义却是varchar : `STATUS` varchar(10) DEFAULT NULL COMMENT '状态',
mysql> SELECT COUNT(*) FROM t_chl_policy_factor;
+-----+
| COUNT(*) |
+-----+
| 289877 |
+-----+
1 row in set (0.29 sec)

mysql>
优化建议 :
可以考虑将status列转换成tinyint类型以提高查询效率。
factor_type列只有8个不同值, 定义却是varchar : `FACTOR_TYPE` varchar(40) NOT NULL COMMENT '指标类型',

```

```
mysql> select distinct FACTOR_TYPE from t_chl_policy_factor;
```

```
+-----+
| FACTOR_TYPE |
+-----+
| 101006      |
| 101003      |
| 101007      |
| 101008      |
| 101002      |
| 101005      |
| 101001      |
| 101004      |
+-----+
```

```
8 rows in set (0.28 sec)
```

```
mysql>
```

鉴于该表总共有二十多万条记录，而status列和factor\_type列基数小，不适宜创建索引

优化建议：

可以考虑将factor\_type列转换成bigint类型。

agent\_id上没有索引，可以考虑建索引。

t\_chl\_policy a

t\_chl\_comm\_policy\_detail e

POLICY\_ID和SETTLE\_ID列上没有索引，可以考虑创建单列索引。

t\_chl\_comm\_settle f

status列只有三个值，定义是：`STATUS` varchar(10) NOT NULL COMMENT '核算状态01-核算中 02-核算完成 04-审核 04-取消'，

```
mysql> select distinct status from t_chl_comm_settle;
```

```
+-----+
| status |
+-----+
| 02      |
| 01      |
| 03      |
+-----+
```

```
3 rows in set (0.00 sec)
```

```
mysql> select count(*) from t_chl_comm_settle;
```

```
+-----+
| count(*) |
+-----+
|        18 |
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql>
```

鉴于该表总共只有18条记录，可以不用创建索引。

v\_chl\_org\_ins\_leader b,

视图，基表：`wift\_iivs`.`t\_chl\_org\_ins\_leader`。

```
mysql> select count(*) from t_chl_org_ins_leader;
```

```
+-----+
| count(*) |
+-----+
|        476 |
+-----+
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql>
```

基表只有476条数据，暂时不考虑创建索引。

等以后数据很多了，可以考虑给CHANNEL\_ID列创建索引。

```
v_chl_org_insurance c,
```

视图，基表：`wift\_iivs`.`t\_chl\_org\_insurance`.

```
mysql> select count(*) from t_chl_org_insurance;
```

```
+-----+
```

```
| count(*) |
```

```
+-----+
```

```
|      925 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql>
```

该表只有925条数据，暂时不考虑创建索引

```
v_agent_channel_change d
```

视图，基表：`wift\_iivs`.`t\_agent\_channel\_change`.

```
mysql> select count(*) from t_agent_channel_change;
```

```
+-----+
```

```
| count(*) |
```

```
+-----+
```

```
|     1966 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql>
```

该表暂时也不考虑创建索引