

pt-duplicate-key-checker 查看是否有重复索引

```
[root@BkpV5Mysql01 ~]# pt-duplicate-key-checker --host=localhost --user=root --password=Root@911
*****
Using the default of SSL_verify_mode of SSL_VERIFY_NONE for client
is deprecated! Please set SSL_verify_mode to SSL_VERIFY_PEER
together with SSL_ca_file|SSL_ca_path for verification.
If you really don't want to verify the certificate and keep the
connection open to Man-In-The-Middle attacks please set
SSL_verify_mode explicitly to SSL_VERIFY_NONE in your application.
*****
at /usr/bin/pt-duplicate-key-checker line 3896.
*****
Using the default of SSL_verify_mode of SSL_VERIFY_NONE for client
is deprecated! Please set SSL_verify_mode to SSL_VERIFY_PEER
together with SSL_ca_file|SSL_ca_path for verification.
If you really don't want to verify the certificate and keep the
connection open to Man-In-The-Middle attacks please set
SSL_verify_mode explicitly to SSL_VERIFY_NONE in your application.
*****
at /usr/bin/pt-duplicate-key-checker line 3896.
# #####
# wift_bcp.t_bank_arap_offset
# #####

# INX_BCP_ARAP_OFFSET__POLICY_NO is a duplicate of INX_BCP_ARAP_OFFSET__BANK_CODE
# Key definitions:
# KEY `INX_BCP_ARAP_OFFSET__POLICY_NO` (`policy_no`),
# KEY `INX_BCP_ARAP_OFFSET__BANK_CODE` (`policy_no`)
# Column types:
#      `policy_no` varchar(40) not null
# To remove this duplicate index, execute:
ALTER TABLE `wift_bcp`.`t_bank_arap_offset` DROP INDEX `INX_BCP_ARAP_OFFSET__POLICY_NO`;

# #####
# wift_gpa.t_pa_policy_insured_log
# #####

# LOG_ID is a duplicate of PRIMARY
# Key definitions:
# KEY `LOG_ID` (`LOG_ID`),
# PRIMARY KEY (`LOG_ID`),
# Column types:
#      `log_id` varchar(40) not null comment 'log??'
# To remove this duplicate index, execute:
ALTER TABLE `wift_gpa`.`t_pa_policy_insured_log` DROP INDEX `LOG_ID`;

# #####
# wift_gprop.t_cs_change
# #####

# FK_CS_CHANGE__APPLY_ID is a left-prefix of INX_CS_CHANGE__QUERY
# Key definitions:
# KEY `FK_CS_CHANGE__APPLY_ID` (`apply_id`),
# KEY `INX_CS_CHANGE__QUERY` (`apply_id`,`PARTITION_INDI`,`grp_policy_id`) COMMENT '????????'
# Column types:
#      `apply_id` varchar(40) default null comment '??id'
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#         `partition_indi` bigint(20) default null
#         `grp_policy_id` varchar(40) default null comment '???id'
# To remove this duplicate index, execute:
ALTER TABLE `wift_gprop`.`t_cs_change` DROP INDEX `FK_CS_CHANGE__APPLY_ID`;

# #####
# wift_gprop.t_prop_beneficiary
# #####

# INX_PROP_BENEFI__PROPOSAL_ID is a duplicate of FK_PROP_BEN__PROP_ID
# Key definitions:
#   KEY `INX_PROP_BENEFI__PROPOSAL_ID` (`POLICY_ID`),
#   KEY `FK_PROP_BEN__PROP_ID` (`POLICY_ID`),
# Column types:
#         `policy_id` varchar(40) collate utf8_bin default null comment '???id'
# To remove this duplicate index, execute:
ALTER TABLE `wift_gprop`.`t_prop_beneficiary` DROP INDEX `INX_PROP_BENEFI__PROPOSAL_ID`;

# INX_PROP_BENEFI__BENE_CUST_ID is a duplicate of FK_PROP_BEN__CUST_ID
# Key definitions:
#   KEY `INX_PROP_BENEFI__BENE_CUST_ID` (`BENE_CUST_ID`),
#   KEY `FK_PROP_BEN__CUST_ID` (`BENE_CUST_ID`),
# Column types:
#         `bene_cust_id` varchar(40) collate utf8_bin default null
# To remove this duplicate index, execute:
ALTER TABLE `wift_gprop`.`t_prop_beneficiary` DROP INDEX `INX_PROP_BENEFI__BENE_CUST_ID`;

# #####
# wift_gprop.t_prop_coverage
# #####

# INX_PROP_COVERAGE__ITEM_ID is a duplicate of PRIMARY
# Key definitions:
#   KEY `INX_PROP_COVERAGE__ITEM_ID` (`ITEM_ID`),
#   PRIMARY KEY (`ITEM_ID`),
# Column types:
#         `item_id` varchar(40) collate utf8_bin not null comment 'id'
# To remove this duplicate index, execute:
ALTER TABLE `wift_gprop`.`t_prop_coverage` DROP INDEX `INX_PROP_COVERAGE__ITEM_ID`;

# INX_PROP_COVERAGE__PROPOSAL_ID is a duplicate of FK_PROP_COV__PROP_ID
# Key definitions:
#   KEY `INX_PROP_COVERAGE__PROPOSAL_ID` (`POLICY_ID`),
#   KEY `FK_PROP_COV__PROP_ID` (`POLICY_ID`),
# Column types:
#         `policy_id` varchar(40) collate utf8_bin default null comment '???id'
# To remove this duplicate index, execute:
ALTER TABLE `wift_gprop`.`t_prop_coverage` DROP INDEX `INX_PROP_COVERAGE__PROPOSAL_ID`;

# #####
# wift_gprop.t_prop_insured
# #####

# INX_PROP_INSURANT__PROPOSAL_ID is a duplicate of FK_PROP_INS__PROP_ID
# Key definitions:
#   KEY `INX_PROP_INSURANT__PROPOSAL_ID` (`POLICY_ID`),
#   KEY `FK_PROP_INS__PROP_ID` (`POLICY_ID`),
# Column types:

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#         `policy_id` varchar(40) collate utf8_bin default null comment '???id'
# To remove this duplicate index, execute:
ALTER TABLE `wift_gprop`.`t_prop_insured` DROP INDEX `INX_PROP_INSURANT_PROPOSAL_ID`;

# INX_PROP_INSURANT_CUSTOMER_ID is a duplicate of FK_PROP_INS_CUST_ID
# Key definitions:
#   KEY `INX_PROP_INSURANT_CUSTOMER_ID` (`CUSTOMER_ID`)
#   KEY `FK_PROP_INS_CUST_ID` (`CUSTOMER_ID`),
# Column types:
#         `customer_id` varchar(40) collate utf8_bin default null comment '??id'
# To remove this duplicate index, execute:
ALTER TABLE `wift_gprop`.`t_prop_insured` DROP INDEX `INX_PROP_INSURANT_CUSTOMER_ID`;

#####
# wift_iws.t_conf_topic_obj
#####

# FK_DOMAIN_OBJ_OBJ is a left-prefix of PRIMARY
# Key definitions:
#   KEY `FK_DOMAIN_OBJ_OBJ` (`DOMAIN_OBJECT_CODE`),
#   PRIMARY KEY (`DOMAIN_OBJECT_CODE`, `TOPIC_CODE`),
# Column types:
#         `domain_object_code` varchar(20) collate utf8_bin not null comment '???code'
#         `topic_code` varchar(20) collate utf8_bin not null comment '??code'
# To remove this duplicate index, execute:
ALTER TABLE `wift_iws`.`t_conf_topic_obj` DROP INDEX `FK_DOMAIN_OBJ_OBJ`;

#####
# wift_iws.t_prod_calc_factor
#####

# fk_T_PROD_CALC_FACTOR_TOPIC_CALC_ID is a left-prefix of PRIMARY
# Key definitions:
#   KEY `fk_T_PROD_CALC_FACTOR_TOPIC_CALC_ID` (`TOPIC_CALC_ID`),
#   PRIMARY KEY (`TOPIC_CALC_ID`, `FACTOR_ID`, `PRODUCT_ID`),
# Column types:
#         `topic_calc_id` varchar(32) collate utf8_bin not null comment '??????'
#         `factor_id` varchar(32) collate utf8_bin not null comment '??id factor_id'
#         `product_id` bigint(20) not null comment '??id???'
# To remove this duplicate index, execute:
ALTER TABLE `wift_iws`.`t_prod_calc_factor` DROP INDEX `fk_T_PROD_CALC_FACTOR_TOPIC_CALC_ID`;

#####
# wift_iws.t_prod_liab_calc_factor
#####

# FK_Reference_106 is a left-prefix of PRIMARY
# Key definitions:
#   KEY `FK_Reference_106` (`LIAB_ID`),
#   PRIMARY KEY (`LIAB_ID`, `TOPIC_CALC_ID`, `FACTOR_ID`),
# Column types:
#         `liab_id` bigint(20) not null comment 'benefit id'
#         `topic_calc_id` varchar(32) collate utf8_bin not null
#         `factor_id` varchar(32) collate utf8_bin not null
# To remove this duplicate index, execute:
ALTER TABLE `wift_iws`.`t_prod_liab_calc_factor` DROP INDEX `FK_Reference_106`;

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# wift_iivs.t_product_package
# #####

# FOREIGN KEY FK_PRODUCT_PACKAGE__PRODUCT_ID (`PRODUCT_ID`) REFERENCES `wift_iivs`.`t_product` (`PRODUCT_ID`) is a duplicate of
FOREIGN KEY FK_PRODUCT_PACKAGE__ORIGIN_PRODUCT (`PRODUCT_ID`) REFERENCES `wift_iivs`.`t_product` (`PRODUCT_ID`)
# Key definitions:
#   CONSTRAINT `FK_PRODUCT_PACKAGE__PRODUCT_ID` FOREIGN KEY (`PRODUCT_ID`) REFERENCES `t_product` (`PRODUCT_ID`)
#   CONSTRAINT `FK_PRODUCT_PACKAGE__ORIGIN_PRODUCT` FOREIGN KEY (`PRODUCT_ID`) REFERENCES `t_product` (`PRODUCT_ID`)
# Column types:
#       `product_id` bigint(20) not null comment '??id'
# To remove this duplicate foreign key, execute:
ALTER TABLE `wift_iivs`.`t_product_package` DROP FOREIGN KEY `FK_PRODUCT_PACKAGE__PRODUCT_ID`;

# MySQL uses the PRIMARY index for this foreign key constraint

# #####

# wift_pa.t_pa_liability_change
# #####

# FK_LIABILITY_CHANGE_POLICY_ID is a left-prefix of INX_PA_LIAB_CHANGE__QUERY
# Key definitions:
#   KEY `FK_LIABILITY_CHANGE_POLICY_ID` (`POLICY_ID`),
#   KEY `INX_PA_LIAB_CHANGE__QUERY` (`POLICY_ID`,`PARTITION_INDI`) COMMENT '????'
# Column types:
#       `policy_id` varchar(40) default null comment '??id'
#       `partition_indi` bigint(20) default null comment '????'
# To remove this duplicate index, execute:
ALTER TABLE `wift_pa`.`t_pa_liability_change` DROP INDEX `FK_LIABILITY_CHANGE_POLICY_ID`;

# #####

# wift_pa.t_pa_policy_insured_log
# #####

# LOG_ID is a duplicate of PRIMARY
# Key definitions:
#   KEY `LOG_ID` (`LOG_ID`),
#   PRIMARY KEY (`LOG_ID`),
# Column types:
#       `log_id` varchar(40) not null comment 'log??'
# To remove this duplicate index, execute:
ALTER TABLE `wift_pa`.`t_pa_policy_insured_log` DROP INDEX `LOG_ID`;

# #####

# wift_pa.t_pa_policy_product_log
# #####

# INX_POLICY_PRDT_LOG__PRODCT_ID is a left-prefix of INX_PA_POL_PROD_LOG__QUERY
# Key definitions:
#   KEY `INX_POLICY_PRDT_LOG__PRODCT_ID` (`PRODUCT_ID`) COMMENT '??????',
#   KEY `INX_PA_POL_PROD_LOG__QUERY` (`PRODUCT_ID`,`POLICY_ID`,`PARTITION_INDI`) COMMENT '?????????'
# Column types:
#       `product_id` bigint(20) default null comment '????'
#       `policy_id` varchar(40) default null comment '??id ??'
#       `partition_indi` bigint(20) default null comment '???????'
# To remove this duplicate index, execute:
ALTER TABLE `wift_pa`.`t_pa_policy_product_log` DROP INDEX `INX_POLICY_PRDT_LOG__PRODCT_ID`;

# #####

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```

# wift_prodiws.t_conf_topic_obj
# #####

# FK_DOMAIN_OBJ__OBJ is a left-prefix of PRIMARY
# Key definitions:
# KEY `FK_DOMAIN_OBJ__OBJ` (`DOMAIN_OBJECT_CODE`),
# PRIMARY KEY (`DOMAIN_OBJECT_CODE`,`TOPIC_CODE`),
# Column types:
# `domain_object_code` varchar(20) collate utf8_bin not null comment '???code'
# `topic_code` varchar(20) collate utf8_bin not null comment '??code'
# To remove this duplicate index, execute:
ALTER TABLE `wift_prodiws`.`t_conf_topic_obj` DROP INDEX `FK_DOMAIN_OBJ__OBJ`;

# #####
# wift_prop.t_cs_change
# #####

# FK_CS_CHANGE__APPLY_ID is a left-prefix of INX_CS_CHANGE__QUERY
# Key definitions:
# KEY `FK_CS_CHANGE__APPLY_ID` (`apply_id`),
# KEY `INX_CS_CHANGE__QUERY` (`apply_id`,`policy_id`,`PARTITION_INDI`) COMMENT '???????'
# Column types:
# `apply_id` varchar(40) default null comment '??id'
# `policy_id` varchar(40) default null comment '??id'
# `partition_indi` bigint(20) default null
# To remove this duplicate index, execute:
ALTER TABLE `wift_prop`.`t_cs_change` DROP INDEX `FK_CS_CHANGE__APPLY_ID`;

# #####
# wift_prop.t_prop_beneficiary
# #####

# INX_PROP_BENEFI__PROPOSAL_ID is a duplicate of FK_PROP_BEN__PROP_ID
# Key definitions:
# KEY `INX_PROP_BENEFI__PROPOSAL_ID` (`PROPOSAL_ID`),
# KEY `FK_PROP_BEN__PROP_ID` (`PROPOSAL_ID`),
# Column types:
# `proposal_id` varchar(40) collate utf8_bin default null
# To remove this duplicate index, execute:
ALTER TABLE `wift_prop`.`t_prop_beneficiary` DROP INDEX `INX_PROP_BENEFI__PROPOSAL_ID`;

# INX_PROP_BENEFI__BENE_CUST_ID is a duplicate of FK_PROP_BEN__CUST_ID
# Key definitions:
# KEY `INX_PROP_BENEFI__BENE_CUST_ID` (`BENE_CUST_ID`)
# KEY `FK_PROP_BEN__CUST_ID` (`BENE_CUST_ID`),
# Column types:
# `bene_cust_id` varchar(40) collate utf8_bin default null
# To remove this duplicate index, execute:
ALTER TABLE `wift_prop`.`t_prop_beneficiary` DROP INDEX `INX_PROP_BENEFI__BENE_CUST_ID`;

# #####
# wift_prop.t_prop_coverage
# #####

# INX_PROP_COVERAGE__PROPOSAL_ID is a duplicate of FK_PROP_COV__PROP_ID
# Key definitions:
# KEY `INX_PROP_COVERAGE__PROPOSAL_ID` (`PROPOSAL_ID`)
# KEY `FK_PROP_COV__PROP_ID` (`PROPOSAL_ID`),

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```

# Column types:
#         `proposal_id` varchar(40) collate utf8_bin default null
# To remove this duplicate index, execute:
ALTER TABLE `wift_prop`.`t_prop_coverage` DROP INDEX `INX_PROP_COVERAGE_PROPOSAL_ID`;

#####
# wift_prop.t_prop_insurant
# #####

# INX_PROP_INSURANT_PROPOSAL_ID is a duplicate of FK_PROP_INS__PROP_ID
# Key definitions:
#   KEY `INX_PROP_INSURANT_PROPOSAL_ID` (`PROPOSAL_ID`),
#   KEY `FK_PROP_INS__PROP_ID` (`PROPOSAL_ID`),
# Column types:
#         `proposal_id` varchar(40) collate utf8_bin default null
# To remove this duplicate index, execute:
ALTER TABLE `wift_prop`.`t_prop_insurant` DROP INDEX `INX_PROP_INSURANT_PROPOSAL_ID`;

# INX_PROP_INSURANT_CUSTOMER_ID is a duplicate of FK_PROP_INS__CUST_ID
# Key definitions:
#   KEY `INX_PROP_INSURANT_CUSTOMER_ID` (`CUSTOMER_ID`)
#   KEY `FK_PROP_INS__CUST_ID` (`CUSTOMER_ID`),
# Column types:
#         `customer_id` varchar(40) collate utf8_bin default null
# To remove this duplicate index, execute:
ALTER TABLE `wift_prop`.`t_prop_insurant` DROP INDEX `INX_PROP_INSURANT_CUSTOMER_ID`;

#####
# Summary of indexes
# #####

# Size Duplicate Indexes    194385474
# Total Duplicate Indexes   23
# Total Indexes             2829
[root@BkpV5Mysql01 ~]#

```