

Database Practices
Oracle FLEXCUBE UBS 14.4 Db 19c
Version 1.0

June 2021



Table of Contents

1. TABLE & INDEX PARTITIONING	1-1
2. SEQUENCE CACHING	2-1
3. SCRIPT TO CAPTURE AND LOCK STATISTICS FOR VOLATILE TABLES IN FLEXCUBE SCHEMA.....	3-1
4. FLEXCUBE PERIODIC TABLE MAINTENANCE.....	4-1
5. FLEXCUBE FUNCTIONALITY RELATED PERFORMANCE CHANGES.....	5-1

1. Table & Index Partitioning

Table and index partitioning helps to reduce the contention and GC related delays in RAC environment. Table and index partitioning is mandatory if you have deployed Oracle FLEXCUBE in RAC database.

Following are the list of tables to be partitioned:

Table Name	Partitioning Type	Column name
ACTB_ACCBAL_HISTORY	LIST	BRANCH_CODE
ACTB_DAILY_LOG	LIST	AC_BRANCH
ACTB_HISTORY	LIST	AC_BRANCH
ACTB_MONTHLY_TOV_HIST	LIST	BRANCH_CODE
ACTB_VD_BAL	LIST	BRN
CATM_CHECK_BOOK	LIST	BRANCH
CATM_CHECK_DETAILS	LIST	BRANCH
CFTB_CONTRACT_CHARGES	HASH	CONTRACT_REFERENCE_N O
CLTB_ACCOUNT_APPS_MASTER	RANGE	BRANCH_CODE,PROCESS_ NO
CLTB_ACCOUNT_COMPONENTS	LIST	BRANCH_CODE
CLTB_ACCOUNT_COMP_BALANCES	LIST	BRANCH_CODE
CLTB_ACCOUNT_COMP_BAL_BREAK UP	LIST	BRANCH_CODE
CLTB_ACCOUNT_COMP_BAL_SUMM ARY	LIST	BRANCH_CODE
CLTB_ACCOUNT_COMP_CALC	LIST	BRANCH_CODE
CLTB_ACCOUNT_COMP_SCH	LIST	BRANCH_CODE
CLTB_ACCOUNT_EVENTS_ADVICES	LIST	BRANCH_CODE
CLTB_ACCOUNT_EVENTS_DIARY	RANGE	BRANCH_CODE,PROCESS_ NO
CLTB_ACCOUNT_PARTIES	LIST	BRANCH_CODE
CLTB_ACCOUNT_ROLL_COMP	LIST	BRANCH_CODE
CLTB_ACCOUNT_SCHEDULES	LIST	BRANCH_CODE
CLTB_ACCOUNT_UDE_EFF_DATES	LIST	BRANCH_CODE
CLTB_ACCOUNT_UDE_VALUES	LIST	BRANCH_CODE
CLTB_ACC_COMPOUNDING_DATES	LIST	BRANCH_CODE
CLTB_ACC_STCH_PROCESED	LIST	BRANCH_CODE
CLTB_AMOUNT_PAID	LIST	BRANCH_CODE
CLTB_AMOUNT_PAID_HISTORY	LIST	BRANCH_CODE
CLTB_AMOUNT_RECD	LIST	BRANCH_CODE
CLTB_CALC_DATES	LIST	BRANCH_CODE
CLTB_DISBR_SCHEDULES	LIST	BRANCH_CODE
CLTB_EVENT_ENTRIES	RANGE	BRANCH_CODE,PROCESS_ NO
CLTB_EVENT_ENTRIES_PENDING	LIST	BRANCH_CODE

Table Name	Partitioning Type	Column name
CLTB_EVENT_REMARKS	LIST	BRANCH_CODE
CLTB_LIQ	LIST	BRANCH_CODE
CLTB_PROCESSED_REVISIONS	LIST	BRANCH_CODE
CLTB_RECON	LIST	BRANCH_CODE
CLTB_REVISION_ACCOUNTS	LIST	BRANCH_CODE
CLTB_REVN_SCHEDULES	LIST	BRANCH_CODE
CLTP_ACCOUNT_COMP_BALANCES	LIST	BRANCH_CODE
CLTP_ACCOUNT_COMP_CALC	LIST	BRANCH_CODE
CLTP_ACCOUNT_COMP_SCH	LIST	BRANCH_CODE
CLTP_ACCOUNT_SCHEDULES	LIST	BRANCH_CODE
CLTP_REVN_SCHEDULES	LIST	BRANCH_CODE
CSTB_AMOUNT_DUE	HASH	CONTRACT_REF_NO
CSTB_AUTO_SETTLE_BLOCK	LIST	ACCOUNT_BR
CSTB_CONTRACT	LIST	BRANCH
CSTB_CONTRACT_EVENT_LOG	HASH	CONTRACT_REF_NO
CSTB_CONTRACT_OVD	HASH	CONTRACT_REF_NO,EVEN T_SEQ_NO,OVD_SEQ_NO
CSTB_EXT_CONTRACT_STAT	LIST	BRANCH_CODE
CSTB_MSG_LOG	HASH	MSG_ID
CSTB_RELATIONSHIP_LINKAGE	HASH	REF_NO
DETB_BATCH_MASTER	LIST	BRANCH_CODE
DETB_JRNL_LOG	LIST	BRANCH_CODE
DETB_PCTRN	LIST	BRANCH
DETB_RTL_TELLER	LIST	BRANCH_CODE
ELTB_UTIL_TXN_LOG	HASH	MASTER_TXN_ID
FBTB_OVD	HASH	SEQ_NO,XREF
FBTB_TXNLOG_DETAILS	HASH	XREFID
FBTB_TXNLOG_MASTER	HASH	XREFID
FCT_FACILITY	RANGE	MIS_DATE
FCT_FAC_EXP_MAP	RANGE	MIS_DATE
FCT_LOAN	RANGE	MIS_DATE
FCT_TRACK_EXPOSURE	RANGE	MIS_DATE
FCT_UTILS_EXP	RANGE	MIS_DATE
FTTB_ACTIVITY_JOURNAL	HASH	CONTRACT_REF_NO
FTTB_CONTRACT_MASTER	HASH	CONTRACT_REF_NO
GETB_MAIN_UTILS	HASH	UTIL_ID
GETB_UTILS	HASH	USER_REFNO
GETB_UTILS_LOG	LIST	UTIL_BRN
GETB_VD_UTILS	HASH	FACILITY_ID
GETH_UTILS	LIST	UTIL_BRN
GETM_LIAB	HASH	ID
GETM_LIAB_CUST	LIST	BRANCH_CODE

Table Name	Partitioning Type	Column name
GLTB_CUST_ACCBREAKUP	LIST	BRANCH_CODE
GLTB_GL_BAL	LIST	BRANCH_CODE
GWTB_DEDUPE	HASH	MSG_REF_NO
GWTB_MSG_IN_LOG	HASH	MSG_REF_NO
GWTB_MSG_OUT_LOG	HASH	MSG_REF_NO
ICTB_ACC_PR	LIST	BRN
ICTB_ACC_PR_HISTORY	LIST	BRN
ICTB_ADJ_INTEREST	LIST	BRN
ICTB_ADJ_INTEREST_HISTORY	LIST	BRN
ICTB_BOOK_ERR	LIST	BRN
ICTB_CHG_VAL	LIST	BRN
ICTB_DLY_MSG_OUT	LIST	BRN
ICTB_DR_INT_DUE	LIST	BOOK_BRN
ICTB_ENTRIES	LIST	BRN
ICTB_ENTRIES_HISTORY	LIST	BRN
ICTB_IS_VALS	LIST	BRN
ICTB_ITM_TOV	LIST	BRN
ICTB_PROBLEM_LOG	LIST	BRN
ICTB_UDEVALS	HASH	COND_KEY
ICTB_UDEVAL_ROW	HASH	COND_KEY
ICTM_ACC	LIST	BRN
ICTM_CHILDTD_DETAILS	LIST	BRN
ICTW_ACC_PR	LIST	BRN
ICTW_BACK_IS_VALS	LIST	BRN
ICTW_MAKE_ROW	HASH	COND_KEY
ISTB_CONTRACTIS	HASH	CONTRACT_REF_NO
ISTB_CONTRACT_DETAILS	HASH	CONTRACT_REF_NO
ISTB_MSGHO	HASH	CONTRACT_REF_NO
ISTM_INSTR	LIST	BRANCH
MITB_CLASS_MAPPING	HASH	UNIT_REF_NO
MSTB_CONTRACT_CHG_ADVICE	HASH	CONTRACT_REF_NO
MSTB_DLY_MSG_OUT	LIST	BRANCH
MSTB_EXT_MSG_OUT	HASH	DCN
MSTB_MSG_PDE_LOG	HASH	DCN
MSTB_MSG_STAT	HASH	REFERENCE_NO
MSTM_MSG_ADDRESS	HASH	CUSTOMER_NO
PCTB_CONTRACT_MASTER	LIST	BRANCH_CODE
SITB_CONTRACT_MASTER	HASH	CONTRACT_REF_NO
SITB_CYCLE_DETAIL	LIST	BRANCH_CODE
SITB_CYCLE_DUE_EXEC	LIST	BRANCH_CODE
SITB_DLY_MSG_OUT	HASH	INSTRUCTION_NO

Table Name	Partitioning Type	Column name
SITB_INSTRUCTION	LIST	BRANCH
SMTB_SMS_ACTION_LOG	HASH	ACTION_SEQUENCE_NO
SMTB_SMS_LOG	HASH	SEQUENCE_NO
SMTT_SMS_LOG	HASH	SEQUENCE_NO
STTB_ACCOUNT	LIST	BRANCH_CODE
STTB_FIELD_LOG	HASH	KEY_ID
STTB_NOTIFICATION	HASH	PKEY_VALUES
STTB_NOTIFICATION_HISTORY	HASH	PKEY_VALUES
STTB_NOTIFICATION_LOG	HASH	REFERENCE_NO
STTB_RECORD_LOG	LIST	BRANCH_CODE
STTB_RECORD_MASTER	LIST	BRANCH_CODE
STTM_ACCOUNT_REPORT_GEN_TIME	LIST	BRANCH_CODE
STTM_ACCSTAT_REPLINES_DETAIL	LIST	BRANCH_CODE
STTM_CUSTAC_BAL_NOTIF	LIST	BRANCH_CODE
STTM_CUSTOMER	HASH	CUSTOMER_NO
STTM_CUST_ACCOUNT	LIST	BRANCH_CODE
STTM_CUST_ACCOUNT_DORMANCY	LIST	BRANCH_CODE
STTM_CUST_PERSONAL	HASH	CUSTOMER_NO
SWTB_ARCHIVE_STAGING	LIST	PROCESS_SEQ_NO
SWTB_TXN_HIST	HASH	XREF
SWTB_TXN_LOG	HASH	XREF
SWTB_TXN_TIME	HASH	XREF
TATB_TXNRULE	HASH	CONTRACT_REF_NO

Following are the list of indexes to be partitioned:

TABLE_NAME	INDEX_NAME	PARTITIONING_TYPE	PARTITION COLUMN
ACTB_ACCBAL_HISTORY	PK01_ACTB_ACCBAL_HISTORY	LIST	BRANCH_CODE
ACTB_DAILY_LOG	IX01_ACTB_DAILY_LOG	LIST	AC_BRANCH
ACTB_DAILY_LOG	IX02_ACTB_DAILY_LOG	HASH	TRN_REF_NO
ACTB_DAILY_LOG	IX07_ACTB_DAILY_LOG	HASH	AC_NO
ACTB_DAILY_LOG	IX08_ACTB_DAILY_LOG	LIST	AC_BRANCH
ACTB_DAILY_LOG	PK01_ACTB_DAILY_LOG	REVERSE	AC_ENTRY_SR_NO
ACTB_DAILY_LOG	X5_ACTB_DAILY_LOG	HASH	RELATED_ACCOUNT
ACTB_DAILY_LOG	X6_ACTB_DAILY_LOG	LIST	AC_BRANCH
ACTB_HISTORY	IX01_ACTB_HISTORY	LIST	AC_BRANCH
ACTB_HISTORY	IX05_ACTB_HISTORY	HASH	AC_NO
ACTB_HISTORY	PK01_ACTB_HISTORY	REVERSE	AC_ENTRY_SR_NO

TABLE_NAME	INDEX_NAME	PARTITIONIN G_TYPE	PARTITION COLUMN
ACTB_MONTHLY_TO V_HIST	PK01_ACTB_MONTHLY_TOV_ HIST	LIST	BRANCH_COD E
ACTB_VD_BAL	PK01_ACTB_VD_BAL	LIST	BRN
CATM_CHECK_BOO K	PK01_CATM_CHECK_BOOK	LIST	BRANCH
CATM_CHECK_DET AILS	PK01_CATM_CHECK_DETAILS	LIST	BRANCH
CFTB_CONTRACT_C HARGES	IX01_CFTB_CONTRACT_CHA RGES	HASH	CONTRACT_R EFERENCE_N O
CFTB_CONTRACT_C HARGES	PK01_CFTB_CONTRACT_CHA RGES	HASH	CONTRACT_R EFERENCE_N O
CLTB_ACCOUNT_AP PS_MASTER	IDX_ACC_BATCH	RANGE	BRANCH_COD E,PROCESS_N O
CLTB_ACCOUNT_AP PS_MASTER	IDX_CLALTACC	HASH	ALT_ACC_NO
CLTB_ACCOUNT_AP PS_MASTER	IND1_CLTB_ACCOUNT_APPS _MASTER	HASH	CUSTOMER_ID
CLTB_ACCOUNT_AP PS_MASTER	PK_CL_ACNT_APP_MASTER	HASH	ACCOUNT_NU MBER
CLTB_ACCOUNT_CO MPOENTS	PK_CL_ACNT_COMP	LIST	BRANCH_COD E
CLTB_ACCOUNT_CO MP_BALANCES	PK_ACCT_COMP_BAL	LIST	BRANCH_COD E
CLTB_ACCOUNT_CO MP_BAL_BREAKUP	IDX_UNQ_COMP_BAL_BREAK UP	LIST	BRANCH_COD E
CLTB_ACCOUNT_CO MP_BAL_SUMMARY	PK_CLTB_ACCOUNT_COMP_ BAL_SUMMA	LIST	BRANCH_COD E
CLTB_ACCOUNT_CO MP_CALC	PK_CLTB_ACCOUNT_COMP_ CALC	HASH	ACCOUNT_NU MBER
CLTB_ACCOUNT_CO MP_SCH	PK_CL_ACNT_COMP_SCH	LIST	BRANCH_COD E
CLTB_ACCOUNT_EV ENTS_ADVICES	PK_CLTB_ACCOUNT_EVENTS _ADVICES	LIST	BRANCH_COD E
CLTB_ACCOUNT_EV ENTS_DIARY	IDX_CL_ACNT_EVNTS_LOG	RANGE	BRANCH_COD E,PROCESS_N O
CLTB_ACCOUNT_EV ENTS_DIARY	IND_INCOMPLETE_EVENTS	RANGE	BRANCH_COD E,PROCESS_N O
CLTB_ACCOUNT_EV ENTS_DIARY	IX01_CLTB_ACCNT_EVNTS_DI RY	RANGE	BRANCH_COD E,PROCESS_N O
CLTB_ACCOUNT_PA RTIES	PK_CL_ACNT_PARTIES	LIST	BRANCH_COD E
CLTB_ACCOUNT_RO LL_COMP	PK_ACCOUNT_ROLL_COMP	LIST	BRANCH_COD E

TABLE_NAME	INDEX_NAME	PARTITIONING_TYPE	PARTITION COLUMN
CLTB_ACCOUNT_SCHEDULES	IDX_CL_AMT_DUE	LIST	BRANCH_CODE
CLTB_ACCOUNT_SCHEDULES	IND_COMP_DUE_DATE	HASH	ACCOUNT_NUMBER
CLTB_ACCOUNT_UDE_EFFECT_DATES	PK_ACC_UDE_EFF_DT	LIST	BRANCH_CODE
CLTB_ACCOUNT_UDE_VALUES	IDX_ARVN	LIST	BRANCH_CODE
CLTB_ACCOUNT_UDE_VALUES	PK_CL_ACNT_UDE_VALS	HASH	ACCOUNT_NUMBER
CLTB_ACC_STCH_PROCESSED	PK_CLTB_ACC_STCH_PROCESSED	LIST	BRANCH_CODE
CLTB_AMOUNT_REC'D	IDX_CLTB_AMOUNT_REC'D	LIST	BRANCH_CODE
CLTB_CALC_DATES	IDX_CALC_DT	LIST	BRANCH_CODE
CLTB_CALC_DATES	PK01_CLTB_CALC_DATES	LIST	BRANCH_CODE
CLTB_DISBR_SCHEDULES	PK_CL_DISBR_SCH	LIST	BRANCH_CODE
CLTB_EVENT_ENTRIES	IDX_ENT_AUTHACNTES	RANGE	BRANCH_CODE,PROCESS_NUMBER
CLTB_EVENT_ENTRIES	IND_CRREF	HASH	CRTRNREFNO
CLTB_EVENT_ENTRIES	IND_DRREF	HASH	DRTRNREFNO
CLTB_EVENT_ENTRIES_PENDING	IDX_PEND_EVENT	LIST	BRANCH_CODE
CLTB_EVENT_ENTRIES_PENDING	IND1_CLTB_EVENT_ENTR_PENDING	HASH	DR_ACC
CLTB_EVENT_REMARKS	PK_CLTB_EVENT_REMARKS	LIST	BRANCH_CODE
CLTB_LIQ	PK_CLTB_LIQ	HASH	ACCOUNT_NUMBER
CLTB_PROCESSED_REVISIONS	PK_CLTB_PROCESSED_REVISIONS	LIST	BRANCH_CODE
CLTB_RECON	PK1_CLTB_RECON	LIST	BRANCH_CODE
CLTB_REVISION_ACCOUNTS	IDX_REVN_BATCH	LIST	BRANCH_CODE
CLTB_REVISION_ACCOUNTS	PK_REVISION_ACCOUNTS	LIST	BRANCH_CODE
CLTB_REVN_SCHEDULES	PK_REVN_SCH	LIST	BRANCH_CODE
CLTB_SDE_VALUES	PK_SDE_VALUES	HASH	ACCOUNT_NUMBER
CLTP_ACCOUNT_COMPANY_BALANCES	PK_CLTP_COMP_BAL	LIST	BRANCH_CODE
CLTP_ACCOUNT_COMPANY_CALC	PK_CLTP_ACCOUNT_COMPANY_CALC	LIST	BRANCH_CODE
CLTP_ACCOUNT_COMPANY_SCH	PK_CLTP_COMP_SCH	HASH	ACCOUNT_NUMBER

TABLE_NAME	INDEX_NAME	PARTITIONING_TYPE	PARTITION COLUMN
CLTP_ACCOUNT_MASTER	IND1_CLTP_ACCOUNT_MASTER	HASH	ACCOUNT_NUMBER
CLTP_ACCOUNT_SCHEDULES	IDX_CLTP_AMT_DUE	LIST	BRANCH_CODE
CLTP_REVN_SCHEDULES	PK_P_REVN_SCH	HASH	ACCOUNT_NUMBER
CSTB_AMOUNT_DUE	PK01_CSTB_AMOUNT_DUE	HASH	CONTRACT_REF_NO
CSTB_AMOUNT_PAID	PK01_CSTB_AMOUNT_PAID	HASH	CONTRACT_REF_NO
CSTB_AUTO_SETTLE_BLOCK	IND_AUTO_STLBLK_ACC	LIST	ACCOUNT_BRANCH
CSTB_AUTO_SETTLE_BLOCK	PK01_CSTB_AUTO_SETTLE_BLOCK	HASH	CONTRACT_REF_NO
CSTB_CONTRACT	IX03_CSTB_CONTRACT	HASH	COUNTERPARTY
CSTB_CONTRACT	IX04_CSTB_CONTRACT	LIST	BRANCH
CSTB_CONTRACT	PK01_CSTB_CONTRACT	HASH	CONTRACT_REF_NO
CSTB_CONTRACT	UI01_CSTB_CONTRACT	HASH	USER_REF_NO
CSTB_CONTRACT_C	I02_CSTB_CONTRACT_C	HASH	CONTRACT_REF_NO
CSTB_CONTRACT_EVENT_LOG	IX02_CSTB_CONTRACT_EVENT_LOG	HASH	CONTRACT_REF_NO
CSTB_CONTRACT_EVENT_LOG	PK01_CSTB_CONTRACT_EVENT_LOG	HASH	CONTRACT_REF_NO
CSTB_CONTRACT_OVD	PK01_CSTB_CONTRACT_OVD	HASH	CONTRACT_REF_NO
CSTB_CONTRACT_USERDEF_VALUES	PK01_CSTB_CONTRACT_USERDEF_VAL	HASH	CONTRACT_REF_NO
CSTB_DOC_UPLOAD_MASTER	PK01_CSTB_DOC_UPLD_MASTER	HASH	KEY_ID
CSTB_EXT_CONTRACT_STAT	IX02_CSTB_EXT_CONTRACT_STAT	LIST	BRANCH_CODE
CSTB_MSG_LOG	PK01_CSTB_MSG_LOG	HASH	MSG_ID
CSTB_RELATIONSHIP_LINKAGE	PK01_CSTB_RELATIONSHIP_LINKAGE	HASH	REF_NO
DETB_BATCH_MASTER	IX01_DETB_BATCH_MASTER	LIST	BRANCH_CODE
DETB_BATCH_MASTER	PK01_DETB_BATCH_MASTER	LIST	BRANCH_CODE
DETB_JRNL_LOG	IX01_DETB_JRNL_LOG	LIST	BRANCH_CODE
DETB_PCTRN	PK01_DETB_PCTRN	LIST	BRANCH
DETB_RTL_TELLER	IND01_DETB_RTL_TELLER	HASH	XREF
DETB_RTL_TELLER	UI01_DETB_RTL_TELLER	HASH	TRN_REF_NO
ELTB_UTIL_TXN_LOG	IX01_ELTB_UTIL_TXN_LOG	HASH	MASTER_TXN_ID
ELTB_UTIL_TXN_LOG	IX02_ELTB_UTIL_TXN_LOG	HASH	MASTER_TXN_ID

TABLE_NAME	INDEX_NAME	PARTITIONING_TYPE	PARTITION COLUMN
FBTB_TXNLOG_DETAILS	IX01_FBTB_TXNLOG_DETAILS	HASH	XREFID
FBTB_TXNLOG_DETAILS	PK_FBTB_TXNLOG_DETAILS	HASH	SEQUENCE_NUMBER
FBTB_TXNLOG_MASTER	IDX_FBTB_TXNLOG_MASTER	HASH	XREFID
FCT_FACILITY	BI_FCT_CUST_FACILITY_KEY_INDEX	RANGE	MIS_DATE
FCT_FACILITY	BI_FCT_CY_FACILITY_KEY_INDEX	RANGE	MIS_DATE
FCT_FACILITY	BI_FCT_DT_FACILITY_KEY_INDEX	RANGE	MIS_DATE
FCT_FACILITY	BI_FCT_FAC_FACILITY_KEY_INDEX	RANGE	MIS_DATE
FCT_FACILITY	BI_FCT_LB_FACILITY_KEY_INDEX	RANGE	MIS_DATE
FCT_FACILITY	FCT_FACILITY_KEY_INDEX	RANGE	MIS_DATE
FCT_FAC_EXP_MAP	BI_FCT_DT_FAC_EXP_MAP_KEY_INDEX	RANGE	MIS_DATE
FCT_FAC_EXP_MAP	BI_FCT_EXP_FAC_EXP_MAP_KEY_INDEX	RANGE	MIS_DATE
FCT_FAC_EXP_MAP	BI_FCT_FAC_EXP_FAC_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_FAC_EXP_MAP	BI_FCT_FAC_FAC_EXP_MAP_KEY_INDEX	RANGE	MIS_DATE
FCT_FAC_EXP_MAP	FCT_FAC_EXP_MAP_KEY_INDEX	RANGE	MIS_DATE
FCT_TRACK_EXPOSURE	BI_FCT_TRACK_EXPOSURE_CY_KEY_INDEX	RANGE	MIS_DATE
FCT_TRACK_EXPOSURE	BI_FCT_TRACK_EXPOSURE_DT_KEY_INDEX	RANGE	MIS_DATE
FCT_TRACK_EXPOSURE	BI_FCT_TRACK_EXPOSURE_EX_KEY_INDEX	RANGE	MIS_DATE
FCT_TRACK_EXPOSURE	FCT_TRACK_EXPOSURE_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_BR_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_CUST_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_CY_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_DT_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_EXP_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_LB_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_MAIN_LB_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	BI_FCT_UTIL_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FCT_UTILS_EXP	FCT_UTILS_EXP_KEY_INDEX	RANGE	MIS_DATE
FTTB_ACTIVITY_JOURNAL	PK01_FTTB_ACTIVITY_JOURNAL	HASH	CONTRACT_REFERENCE_NUMBER
FTTB_CONTRACT_MASTER	IDX01_FTTB_CONTRACT_MASTER	HASH	CONTRACT_REFERENCE_NUMBER

TABLE_NAME	INDEX_NAME	PARTITIONIN G_TYPE	PARTITION COLUMN
FTTB_CONTRACT_M ASTER	PK01_FTTB_CONTRACT_MAS TER	HASH	CONTRACT_R EF_NO
FTTB_CUSTTFR_CO NTRACT_DTLS	IDX01_FTTB_CUSTTFR_CON_ DTLS	HASH	CONTRACT_R EF_NUMBER
FTTB_STOP_PMNT	PK01_FTTB_STOP_PMNT	HASH	CONTRACT_R EF_NO
GETB_UTILS	UK01_GETB_UTILS	HASH	USER_REFNO
GETB_UTILS_LOG	PK01_GETB_UTILS_LOG	HASH	SERIAL_NO
GETB_VD_UTILS	PK01_GETB_VD_UTILS	HASH	FACILITY_ID
GETM_LIAB	PK01_GETM_LIAB	HASH	ID
GETM_LIAB	UI01_GETM_LIAB	HASH	LIAB_NO
GETM_LIAB_CUST	PK01_GETM_LIAB_CUST	HASH	ID
GETM_LIAB_CUST	UI01_GETM_LIAB_CUST	HASH	CUSTOMER_N O
GLTB_CUST_ACCBR EAKUP	PK01_GLTB_CUST_ACCBREA KUP	LIST	BRANCH_COD E
GLTB_GL_BAL	PK01_GLTB_GL_BAL	LIST	BRANCH_COD E
GWTB_DEDUPE	DUP_UNQ	HASH	EXT_SYSTEM, MSG_ID_COMP L,MSG_ID_SRC
GWTB_DEDUPE	MSG_REF_PK	HASH	MSG_REF_NO
GWTB_MSG_IN_LOG	PK01_GWTB_MSG_IN_LOG	HASH	MSG_REF_NO
GWTB_MSG_OUT_L OG	PK01_GWTB_MSG_OUT_LOG	HASH	MSG_REF_NO
ICTB_ACC_PR	IX01_ICTB_ACC_PR	RANGE	BRN,PROCESS
ICTB_ACC_PR	IX02_ICTB_ACC_PR	HASH	ACC
ICTB_ACC_PR	PK01_ICTB_ACC_PR	RANGE	BRN,PROCESS
ICTB_ACC_PR_HIST ORY	PK01_ICTB_ACC_PR_HIST ORY	LIST	BRN
ICTB_ADJ_INTERES T	PK01_ICTB_ADJ_INTEREST	LIST	BRN
ICTB_ADJ_INTERES T_HISTORY	PK01_ICTB_ADJ_INTEREST_H ISTORY	HASH	ACC
ICTB_BOOK_ERR	IX01_ICTB_BOOK_ERR	LIST	BRN
ICTB_BOOK_ERR	PK_ICTB_BOOK_ERR	HASH	ID
ICTB_CHG_VAL	X1_ICTB_CHG_VAL	LIST	BRN
ICTB_DR_INT_DUE	PK01_ICTB_DR_INT_DUE	HASH	ACC
ICTB_ENTRIES	IX01_ICTB_ENTRIES	RANGE	BRN,PROCESS
ICTB_ENTRIES	PK01_ICTB_ENTRIES	RANGE	BRN,PROCESS
ICTB_ENTRIES_HIST ORY	PK01_ICTB_ENTRIES_HISTOR Y	RANGE	BRN,PROCESS
ICTB_IS_VALS	PK01_ICTB_IS_VALS	LIST	BRN
ICTB_ITM_TOV	IDX_TOV	HASH	ACC
ICTB_PROBLEM_LO G	IX01_IC_PROB_LOG	LIST	BRN
ICTB_PROBLEM_LO G	PK_ICTB_PROBLEM_LOG	HASH	ID

TABLE_NAME	INDEX_NAME	PARTITIONIN G_TYPE	PARTITION COLUMN
ICTB_UDEVALS	PK01_ICTB_UDEVALS	HASH	COND_KEY
ICTB_UDEVAL_ROW	PK01_ICTB_UDEVAL_ROW	HASH	COND_KEY
ICTM_ACC	PK01_ICTM_ACC	LIST	BRN
ICTM_ACC_PR	PK01_ICTM_ACC_PR	HASH	ACC
ICTM_CHILDTD_DETAILS	PK01_ICTM_CHILDTD_DETAILS	LIST	BRN
ICTW_ACC_PR	IX01_ICTW_ACC_PR	HASH	ACC
ICTW_ACC_PR	IX02_ICTW_ACC_PR	LIST	BRN
ICTW_BACK_IS_VALS	IND_ICTW_BACK_IS_VALS	LIST	BRN
ICTW_MAKE_ROW	PK01_ICTW_MAKE_ROW	HASH	COND_KEY
ISTB_CONTRACTIS	PK01_ISTB_CONTRACTIS	HASH	CONTRACT_REF_NO
ISTB_CONTRACTIS_SWIFT	PK_ISTB_CONTRACTIS_SWIFT	HASH	CONTRACT_REF_NO
ISTB_CONTRACT_DETAILS	PK01_ISTB_CONTRACT_DETAILS	HASH	CONTRACT_REF_NO
ISTB_MSGHO	IND_ISTB_MSGHO	HASH	CONTRACT_REF_NO
ISTB_MSGHO	PK01_ISTB_MSGHO	HASH	CONTRACT_REF_NO
ISTM_INSTR	PK01_ISTM_INSTR	LIST	BRANCH
MITB_CLASS_MAPPING	PK01_MITB_CLASS_MAPPING	HASH	UNIT_REF_NO
MITM_CUSTOMER_DEFAULT	PK01_MITM_CUSTOMER_DEFAULT	HASH	CUSTOMER
MITM_DEFAULT_CODES	PK_MITM_DEFAULT_CODES	HASH	KEY_ID
MSTB_ARCHIVE_OUT	IND_MSTB_ARCHIVE_OUT	HASH	REFERENCE_NO
MSTB_CONTRACT_CHG_ADVICE	IND_MSTB_CONTRACT_CHG_ADV	HASH	CONTRACT_REF_NO
MSTB_CONTRACT_CHG_ADVICE	PK01_MSTB_CONTRACT_CHG_ADVICE	HASH	CONTRACT_REF_NO
MSTB_DLY_MSG_OUT	IX01_MSTB_DLY_MSG_OUT	LIST	BRANCH
MSTB_DLY_MSG_OUT	IX02_MSTB_DLY_MSG_OUT	HASH	REFERENCE_NO
MSTB_DLY_MSG_OUT	PK01_MSTB_DLY_MSG_OUT	HASH	DCN
MSTB_DLY_MSG_OUT	X9_MSTB_DLY_MSG_OUT	LIST	BRANCH
MSTB_EXT_MSG_OUT	PK01_MSTB_EXT_MSG_OUT	HASH	DCN
MSTB_MSG_PDE_LOG	IND_MSTB_MSG_PDE_LOG	HASH	HASH_VALUE
MSTB_MSG_PDE_LOG	PK01_MSTB_MSG_PDE_LOG	HASH	DCN
MSTB_MSG_STAT	IND_MSTB_MSG_STAT	HASH	REFERENCE_NO

TABLE_NAME	INDEX_NAME	PARTITIONIN G_TYPE	PARTITION COLUMN
MSTB_MSG_STAT	PK_MSTB_MSG_STAT	HASH	REFERENCE_N O
MSTM_CUST_ADDR ESS	PK01_MSTM_CUST_ADDRESS	HASH	CUSTOMER_N O
PCTB_CONTRACT_M ASTER	IX03_PCTB_CONTRACT_MAS TER	LIST	BRANCH_COD E
PCTB_CONTRACT_M ASTER	PK01_PCTB_CONTRACT_MAS TER	HASH	CONTRACT_R EF_NO
SITB_CONTRACT_M ASTER	IND_SITB_CONTRACT_MASTE R	HASH	USER_REF_NU MBER
SITB_CYCLE_DETAI L	IX01_SITB_CYCLE_DETAIL	HASH	CONTRACT_R EF_NO
SITB_CYCLE_DETAI L	PK01_SITB_CYCLE_DETAIL	HASH	CONTRACT_R EF_NO
SITB_CYCLE_DUE_E XEC	PK01_SITB_CYCLE_DUE_EXE C	HASH	CONTRACT_R EF_NO
SITB_DLY_MSG_OU T	PK01_SITB_DLY_MSG_OUT	HASH	INSTRUCTION_ NO
SITB_INSTRUCTION	IND_SITB_INSTRUCTION	HASH	USER_INST_N O
SITB_INSTRUCTION	IX01_SITB_INSTRUCTION	LIST	BRANCH
SITB_INSTRUCTION	PK01_SITB_INSTRUCTION	HASH	INSTRUCTION_ NO
SMTB_SMS_ACTION _LOG	PK_SMTB_SMS_ACTION_LOG	HASH	ACTION_SEQU ENCE_NO
SMTB_SMS_LOG	PK01_SMTB_SMS_LOG	HASH	SEQUENCE_N O
SMTT_SMS_LOG	IND_SMTT_SMS_LOG	HASH	SEQUENCE_N O
STTB_ACCOUNT	IX01_STTB_ACCOUNT	LIST	BRANCH_COD E
STTB_ACCOUNT	IX02_STTB_ACCOUNT	HASH	ALT_AC_NO
STTB_ACCOUNT	IX03_STTB_ACCOUNT	LIST	BRANCH_COD E
STTB_FIELD_LOG	PK01_STTB_FIELD_LOG	HASH	KEY_ID
STTB_NOTIFICATION	STTB_NOTIFICATION_P01	HASH	PKEY_VALUES
STTB_NOTIFICATION _HISTORY	STTB_NOTIFICATION_HISTOR Y_P01	HASH	PKEY_VALUES
STTB_NOTIFICATION _LOG	STTB_NOTIFICATION_LOG_P0 1	HASH	REFERENCE_N O
STTB_RECORD_MAS TER	IND1_STTB_RECORD_MASTE R	LIST	BRANCH_COD E
STTB_RECORD_MAS TER	IND_STTB_REC_MSTR	LIST	BRANCH_COD E
STTB_RECORD_MAS TER	PK_STTB_RECORD_MASTER	HASH	KEY_ID
STTM_ACCOUNT_RE PORT_GEN_TIME	PK_STTM_ACCOUNT_REPOR T_GEN_TI	HASH	CUST_AC_NO
STTM_ACCSTAT_RE PLINES_DETAIL	PK01_STTM_ACCSTAT_REPLI NES_DET	LIST	BRANCH_COD E

TABLE_NAME	INDEX_NAME	PARTITIONING_TYPE	PARTITION COLUMN
STTM_CUSTAC_BAL_NOTIF	PK01_STTM_CUSTAC_BAL_NOTIF	LIST	BRANCH_CODE
STTM_CUSTOMER	PK01_STTM_CUSTOMER	HASH	CUSTOMER_NO
STTM_CUST_ACCOUNT	IND1_STTM_CUST_ACCOUNT	LIST	BRANCH_CODE
STTM_CUST_ACCOUNT	IX03_STTM_CUST_ACCOUNT	LIST	BRANCH_CODE
STTM_CUST_ACCOUNT	IX04_STTM_CUST_ACCOUNT	LIST	BRANCH_CODE
STTM_CUST_ACCOUNT	PK01_STTM_CUST_ACCOUNT	HASH	CUST_AC_NO
STTM_CUST_ACCOUNT	UI01_STTM_CUST_ACCOUNT	LIST	BRANCH_CODE
STTM_CUST_ACCOUNT_DORMANCY	IX01_STTM_CUST_ACCOUNT_DORMANC	HASH	CUST_AC_NO
STTM_CUST_DOMESTIC	PK01_STTM_CUST_DOMESTIC	HASH	CUSTOMER_NO
STTM_CUST_PERSONAL	PK01_STTM_CUST_PERSONAL	HASH	CUSTOMER_NO
SVTB_ACCOUNT_HANDOFF	PK01_SVTB_ACCOUNT_HANDOFF	HASH	CONTRACT_REF_NO
SWTB_TXN_HIST	PK01_SWTB_TXN_HIST	HASH	XREF
SWTB_TXN_LOG	PK01_SWTB_TXN_LOG	HASH	XREF
SWTB_TXN_LOG	P_KEY_INDEX	HASH	P_KEY
SWTB_TXN_LOG_HASH	INDX1_SWTB_TXN_LOG_HASH	RANGE	PURGE_DATE
SWTB_TXN_LOG_HISTORY_PAR	PK01_SWTB_TXN_LOG_HPAR	LIST	SEQ_NO
SWTB_TXN_LOG_HIST_HASH	P_KEY_SWTB_TXN_LOG_HIST_HASH	HASH	XREF
SWTB_TXN_LOG_HIST_LIST	P_KEY_INDEX_HIST_LIST	LIST	PROCESS_SEQ_NO
SWTB_TXN_LOG_LIST	P_KEY_INDEX_LIST	LIST	PROCESS_SEQ_NO
SWTB_TXN_LOG_PAR	PK01_SWTB_TXN_LOG_PAR	LIST	SEQ_NO
SWTB_TXN_TIME	PK01_SWTB_TXN_TIME	HASH	XREF
TATB_TXNRULE	PK01_TATB_TXNRULE	HASH	CONTRACT_REF_NO

Following points are to be noted during partitioning:

- Keep the number of partitions same as number of branches for list partitions.
- Exact name of some indexes might be different.
- 'Actb_daily_log and actb_history tables' primary key index has to be recreated as reverse key index without partition as follows:

```
Alter table ACTB_DAILY_LOG drop primary key;
```

```
Drop index PK01_ACTB_DAILY_LOG;
```

```
Create unique index PK01_ACTB_DAILY_LOG on ACTB_DAILY_LOG  
(AC_ENTRY_SR_NO) reverse;
```

```
Alter table ACTB_DAILY_LOG add constraint PK01_ACTB_DAILY_LOG  
primary key (AC_ENTRY_SR_NO) using index PK01_ACTB_DAILY_LOG;
```

➤ Similarly recreate actb_history primary key as reverse index.

2. Sequence Caching

Sequence Caching is applicable only if Oracle FLEXCUBE is deployed in RAC database.

Heavy use of sequences in RAC database causes high DFS lock handle & row cache lock waits which affect the application scalability. In order to overcome this issue, the sequences are to be cached with no order option.

Please refer FCUBS-Sequence-Cache.xlsx for recommended sequence cache values.

3. Script to Capture and Lock Statistics for Volatile Tables in FLEXCUBE Schema

As mentioned in section on FLEXCUBE specific Statistic collection, statistics on the volatile tables are critical for performance and the statistics would have to be collected when these volatile tables have data. We recommend the below tables statistics to be locked after gathering statistics during peak volume.

1. ACTB_DAILY_LOG
2. ACTB_ACSERVICE_HANDOFF
3. ACTB_ENTRIES_HANDOFF

The approach to be followed is as follows:

- Identify the time period where these specific tables have maximum data. E.g. ACTB_DAILY_LOG is an accounting table that is volatile. This table is bound to have maximum data (Peak Day of Business/ Month End Day).
- Unlock and Collect Statistics for this specific table on the day of Maximum Volume.
- Lock the statistics

Note: Different FLEXCUBE tables might have different days of peak volume and hence the statistics should be collected at different days matching the peak volume for the respective table.

The statistics would have to be monthly refreshed so that the boundary values are refreshed. Lower bound and upper bound values are stored in the data dictionary and out dated boundary values might skew the cost of the SQL.

Use the attached script to capture statistics. The script would have to be run connecting as FLEXCUBE schema. The following example uses ACTB_DAILY_LOG as the volatile table. The same script can be used for other tables as well.

```
Spool FCUBS_Vol_Table_Stats.txt

SELECT NUM_ROWS, BLOCKS, SAMPLE_SIZE, TO_CHAR(LAST_ANALYZED, 'DD-
MON-YYYY HH24:MI:SS')

from USER_TAB_STATISTICS

WHERE TABLE_NAME='ACTB_DAILY_LOG';

exec dbms_stats.unlock_table_stats(USER, 'ACTB_DAILY_LOG');

exec
dbms_stats.gather_table_stats(OWNNAME=>USER, tabname=>'ACTB_DAILY_
LOG', METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', CASCADE=>true,
DEGREE=>4);

exec dbms_stats.lock_table_stats(USER, 'ACTB_DAILY_LOG');

SELECT NUM_ROWS, BLOCKS, SAMPLE_SIZE, TO_CHAR(LAST_ANALYZED, 'DD-
MON-YYYY HH24:MI:SS')
```

```
from USER_TAB_STATISTICS  
  
WHERE TABLE_NAME='ACTB_DAILY_LOG';  
  
Spool off
```

4. FLEXCUBE Periodic Table Maintenance

Find below the list of tables and the corresponding action that needs to be planned in a periodical basis so that no performance degradation is observed over a period of time. These activities need to be planned ahead since this would require downtime. Also ensure proper backups are taken prior to any table maintenance activity.

Details of the various Actions are as below:

Truncate Table: Take the backup of the current table data and truncate the table.

Compress Table: Data of this table is required, hence compress table and index data.

Recreate Table: These tables and it corresponding indexes needs to be rebuild.

Table Name	Action
ACTB_ACCBAL_HISTORY	Compress Table
ACTB_DAILY_LOG	Recreate table
ACTB_HISTORY	Compress Table
CSTB_MSG_LOG	Truncate Table
DETB_RTL_TELLER	Recreate table
FBTB_TXNLOG_DETAILS_HIST	Truncate Table
ICTB_ENTRIES_HISTORY	Compress Table
ICTB_ICALC_STMT	Recreate table
MITB_CLASS_MAPPING	Compress Table
SMTB_IMAGE_UPLOAD	Truncate Table
SMTB_SMS_ACTION_LOG_HIST	Truncate Table
STTB_FIELD_LOG	Recreate table
STTB_FIELD_LOG_HIST	Truncate Table
STTB_RECORD_LOG	Recreate table
STTM_CUST_IMAGE	Compress Table
SVTM_CIF_SIG_DET	Compress Table
SVTM_UPLOAD_CIF_SIG_DET	Truncate Table
SWTB_TXN_HIST	Recreate table

Note: For Maintenance Activity related to Truncate and Recreate table, the impact to be analyzed at site level before implementing the action. Also for any purging related solutions required, please refer the document FS_FCUBS_12.0.2_CO_Purging.docx.

5. FLEXCUBE Functionality Related Performance Changes

The following parameters are discussed on functionality related performance changes:

Parameter	Recommended Value	How to find
Real debug parameter	N	select param_val from cstb_param where param_name='REAL_DEBUG'
ONLINE GL Update	N	select ONLINE_GL_UPDATE from STTM_BANK
VD Balance update	OFFLINE	select param_val from cstb_param where param_name='VDBAL_UPDATE'
CL - Netting - Accrual	Y	select GL_NETTING_ACCR from CLTM_BRANCH_PARAMETERS
CL - Netting - Liquidation	Y	select GL_NETTING_LIQD from CLTM_BRANCH_PARAMETERS
CL - Netting - STCH	Y	select GL_NETTING_STCH from CLTM_BRANCH_PARAMETERS