|  |  |  |
| --- | --- | --- |
| 列 | 数据类型 | 描 述 |
| SCN | NUMBER | 系统改变编号，System change number (SCN) when the database change was made |
| CSCN | NUMBER | 事务提交的系统改变编号；只有在调用DBMS\_LOGMNR.START\_LOGMNR()时指定COMMITTED\_DATA\_ONLY参数才有效； System change number (SCN) when the transaction committed; only meaningful if the COMMITTED\_DATA\_ONLY option was chosen in a DBMS\_LOGMNR.START\_LOGMNR() invocation |
| TIMESTAMP | DATE | 数据库改变时的时间戳；Timestamp when the database change was made |
| COMMIT\_TIMESTAMP | DATE | 提交事务时的时间戳；只有在调用DBMS\_LOGMNR.START\_LOGMNR()时指定COMMITTED\_DATA\_ONLY参数才有效； Timestamp when the transaction committed; only meaningful if the COMMITTED\_DATA\_ONLY option was chosen in a DBMS\_LOGMNR.START\_LOGMNR() invocation |
| THREAD# | NUMBER | 导致数据库改变的线程编号；Number of the thread that made the change to the database |
| LOG\_ID | NUMBER | 此列已废弃。This column is deprecated. |
| XIDUSN | NUMBER | Transaction ID undo segment number of the transaction that generated the change |
| XIDSLT | NUMBER | Transaction ID slot number of the transaction that generated the change |
| XIDSQN | NUMBER | Transaction ID sequence number of the transaction that generated the change |
| PXIDUSN | NUMBER | Parent transaction ID undo segment number of a parallel transaction |
| PXIDSLT | NUMBER | Parent transaction ID slot number of a parallel transaction |
| PXIDSQN | NUMBER | Parent transaction ID sequence number of a parallel transaction |
| RBASQN | NUMBER | Sequence# associated with the Redo Block Address (RBA) of the redo record associated with the change |
| RBABLK | NUMBER | RBA block number within the log file |
| RBABYTE | NUMBER | RBA byte offset within the block |
| UBAFIL | NUMBER | Undo Block Address (UBA) file number identifying the file containing the undo block |
| UBABLK | NUMBER | UBA block number for the undo block |
| UBAREC | NUMBER | UBA record index within the undo block |
| UBASQN | NUMBER | UBA undo block sequence number |
| ABS\_FILE# | NUMBER | Data block absolute file number of the block changed by the transaction |
| REL\_FILE# | NUMBER | Data block relative file number. The file number is relative to the tablespace of the object |
| DATA\_BLK# | NUMBER | Data block number within the file |
| DATA\_OBJ# | NUMBER | Data block object number identifying the object |
| DATA\_OBJD# | NUMBER | Data block data object number identifying the object within the tablespace |
| SEG\_OWNER | VARCHAR2(32) | Owner of the modified segment |
| SEG\_NAME | VARCHAR2(256) | Name of the modified data segment |
| TABLE\_NAME | VARCHAR2(32) | Name of the modified table (in case the redo pertains to a table modification) |
| SEG\_TYPE | NUMBER | Type of the modified data segment. Possible values are:   * 0 = UNKNOWN * 1 = INDEX * 2 = TABLE * 19 = TABLE PARTITION * 20 = INDEX PARTITION * 34 = TABLE SUBPARTITION   All other values = UNSUPPORTED |
| SEG\_TYPE\_NAME | VARCHAR2(32) | Segment type name. Possible values are:   * UNKNOWN * INDEX * TABLE * TABLE PARTITION * UNSUPPORTED * TABLE\_SPACE |
| TABLE\_SPACE | VARCHAR2(32) | Name of the tablespace containing the modified data segment. This column is not populated for rows where the value of the OPERATION column is DDL. This is because DDL may operate on more than one tablespace. |
| ROW\_ID | VARCHAR2(18) | Row ID of the row modified by the change (only meaningful if the change pertains to a DML) This will be NULL if the redo record is not associated with a DML. |
| SESSION# | NUMBER | Session number of the session that made the change |
| SERIAL# | NUMBER | Serial number of the session that made the change |
| USERNAME | VARCHAR2(30) | Name of the user who executed the transaction |
| SESSION\_INFO | VARCHAR2(4000) | Information about the database session that executed the transaction. Contains process information, machine name from which the user logged in etc. A possible SESSION\_INFO column may contain the following:  login\_username = HR  client\_info =  OS\_username = jkundu  Machine\_name = nirvan  OS\_terminal = pts/31  OS\_program\_name = sqlplus@nirvan (TNS V1-V3) |
| TX\_NAME | VARCHAR2(256) | Name of the transaction that made the change. This is only meaningful if the transaction is a named transaction. |
| ROLLBACK | NUMBER | 1 = if the redo record was generated because of a partial or a full rollback of the associated transaction  0 = otherwise |
| OPERATION | VARCHAR2(32) | User level SQL operation that made the change. Possible values are:   * INSERT = change was caused by an insert statement * UPDATE = change was caused by an update statement * DELETE = change was caused by a delete statement * DDL = change was caused by a DDL statement * START = change was caused by the start of a transaction * COMMIT = change was caused by the commit of a transaction * ROLLBACK = change was caused by a full rollback of a transaction * LOB\_WRITE = change was caused by an invocation of DBMS\_LOB.WRITE * LOB\_TRIM = change was caused by an invocation of DBMS\_LOB.TRIM * LOB\_ERASE = change was caused by an invocation of DBMS\_LOB.ERASE * SELECT\_FOR\_UPDATE = operation was a SELECT FOR UPDATE statement * SEL\_LOB\_LOCATOR = operation was a SELECT statement that returns a LOB locator * MISSING\_SCN = LogMiner encountered a gap in the redo records. This is most likely because not all redo logs were registered with LogMiner. * INTERNAL = change was caused by internal operations initiated by the database * UNSUPPORTED = change was caused by operations not currently supported by LogMiner (for example, changes made to tables with ADT columns) |
| OPERATION\_CODE | NUMBER | Number of the operation code. Possible values are:   * 0 = INTERNAL * 1 = INSERT * 2 = DELETE * 3 = UPDATE * 5 = DDL * 6 = START * 7 = COMMIT * 9 = SELECT\_LOB\_LOCATOR * 10 = LOB\_WRITE * 11 = LOB\_TRIM * 25 = SELECT\_FOR\_UPDATE * 28 = LOB\_ERASE * 34 = MISSING\_SCN * 36 = ROLLBACK * 255 = UNSUPPORTED |
| SQL\_REDO | VARCHAR2(4000) | Reconstructed SQL statement that is equivalent to the original SQL statement that made the change. Please refer to Oracle Database Utilities before executing SQL\_REDO to your database.  LogMiner does not generate SQL redo for temporary tables. In such a case, this column will contain the string"/\* No SQL\_REDO for temporary tables \*/". |
| SQL\_UNDO | VARCHAR2(4000) | Reconstructed SQL statement that can be used to undo the effect of the original statement that made the change. DDL statements have no corresponding SQL\_UNDO. Please refer to Oracle Database Utilities before executing SQL\_UNDO to your database.  LogMiner does not generate SQL undo for temporary tables. In such a case, this column will contain the string"/\* No SQL\_UNDO for temporary tables \*/". |
| RS\_ID | VARCHAR2(32) | Record set ID. The tuple (RS\_ID, SSN) together uniquely identifies a row in V$LOGMNR\_CONTENTS. RS\_ID uniquely identifies the redo record that generated the row. |
| SEQUENCE# | NUMBER | Sequence number of the redo log that contained the redo record corresponding to the database change |
| SSN | NUMBER | SQL sequence number. Used in conjunction with RS\_ID, this uniquely identifies a row in the V$LOGMNR\_CONTENTS view. |
| CSF | NUMBER | Continuation SQL flag. Possible values are:   * 0 = indicates SQL\_REDO and SQL\_UNDO is contained within the same row * 1 = indicates that either SQL\_REDO or SQL\_UNDO is greater than 4000 bytes in size and is continued in the next row returned by the view |
| INFO | VARCHAR2(32) | Informational message about the row. For instance, the string "USER DDL" in INFO column indicates that the DDL statement returned in SQL\_REDO column was the top-level DDL executed by the user and the string "INTERNAL DDL" in INFO column indicates that DDL statement returned in SQL\_REDO column was executed internally by the RDBMS. |
| STATUS | NUMBER | 0 indicates that the reconstructed SQL statements as shown in the SQL\_REDO and SQL\_UNDO columns are valid executable SQL statements. Otherwise, the reconstructed SQL statements are not executable. This may be due to the fact that no data dictionary was provided to LogMiner for the analysis, or that the data dictionary provided did not have the definition of the object being mined. |
| REDO\_VALUE | NUMBER | Used as input to the DBMS\_LOGMNR.MINE\_VALUE() and DBMS\_LOGMNR.COLUMN\_PRESENT() functions |
| UNDO\_VALUE | NUMBER | Used as input to the DBMS\_LOGMNR.MINE\_VALUE() and DBMS\_LOGMNR.COLUMN\_PRESENT() functions |
| SQL\_COLUMN\_TYPE | VARCHAR2(30) | 此列已废弃。This column is deprecated. |
| SQL\_COLUMN\_NAME | VARCHAR2(30) | 此列已废弃。This column is deprecated. |
| REDO\_LENGTH | NUMBER | 此列已废弃。This column is deprecated. |
| REDO\_OFFSET | NUMBER | 此列已废弃。This column is deprecated. |
| UNDO\_LENGTH | NUMBER | 此列已废弃。This column is deprecated. |
| UNDO\_OFFSET | NUMBER | 此列已废弃。This column is deprecated. |
| DATA\_OBJV# | NUMBER | Version number of the table being modified |
| SAFE\_RESUME\_SCN | NUMBER | Reserved for future use |
| XID | RAW(8) | Raw representation of the transaction identifier |
| PXID | RAW(8) | Raw representation of the parent transaction identifier |
| AUDIT\_SESSIONID | NUMBER | Audit session ID associated with the user session making the change |