

Virtual Table

Virtual Table . V\$.

, Virtual Table JOIN .

Virtual Table // .

Session/System

V\$PROPERTY

.

NAME	
VALUE	
TYPE	
DEFLT	
MIN	
MAX	

V\$SESSION

MACHBASE .

ID	
CLOSED	
USER_ID	
LOGIN_TIME	
SQL_LOGGING	Trace Log 1. Parsing, Validation, Optimization . 2. DDL . 3. ()
SHOW_HIDDEN_COLS	SELECT ,
FEEDBACK_APPEND_ERROR	APPEND
DEFAULT_DATE_FORMAT	Datetime
HASH_BUCKET_SIZE	, Temp Hashtable Bucket
MAX_QPX_MEM	
RS_CACHE_ENABLE	Result Cache
RS_CACHE_TIME_BOUND_MSEC	Result Cache ,
RS_CACHE_MAX_MEMORY_PER_QUERY	Result Cache ,
RS_CACHE_MAX_RECORD_PER_QUERY	Result Cache ,

RS_CACHE_APPROXIMATE_RESULT_ENABLE	Result Cache ,
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V\$SESMEM

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SID	
ID	
USAGE	

V\$SESSTAT

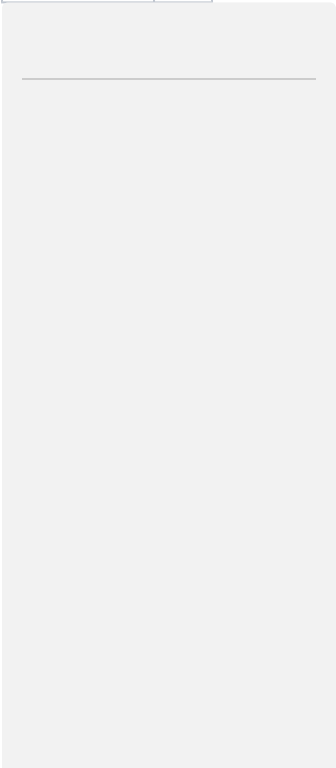
.

SID	
ID	
VALUE	

V\$SESTIME

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SID	
ID	
ACCUM_TICK	
MAX_TICK	()



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/System

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- LSM Index

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- Volatile

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- Tag Rollup

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V\$SYSTEMEM

ID	
NAME	
USAGE	
MAX_USAGE	()

V\$SYSSTAT

ID	
NAME	
VALUE	

V\$SYSTIME

ID	
NAME	
ACCUM_TICK	
AVG_TICK	()
MIN_TICK	()
MAX_TICK	()
COUNT	

V\$STMT

ID	
SESS_ID	
STATE	
RECORD_SIZE	SELECT ,
QUERY	

V\$VERSION

MACHBASE .

BINARY_DB_MAJOR_VERSION	DB
BINARY_DB_MINOR_VERSION	DB
BINARY_META_MAJOR_VERSION	META
BINARY_META_MINOR_VERSION	META
BINARY_CM_MAJOR_VERSION	Client (Communication Level)
BINARY_CM_MINOR_VERSION	Client (Communication Level)
BINARY_SIGNATURE	DB
FILE_DB_MAJOR_VERSION	File DB
FILE_DB_MINOR_VERSION	File DB
FILE_META_MAJOR_VERSION	File META
FILE_META_MINOR_VERSION	File META
FILE_CM_MAJOR_VERSION	File Client (Communication Level)
FILE_CM_MINOR_VERSION	File Client (Communication Level)
FILE_CREATE_TIME	
EDITION	MACHBASE

Result Cache

V\$RS_CACHE_LIST

TOUCH_TIME	
USER_ID	
QUERY	
TIME_SPENT	
TABLE_COUNT	
RECORD_COUNT	
REFERENCE_COUNT	
HIT_COUNT	
AGGR_TOUCH_TIME	,
AGGR_HIT_COUNT	,

V\$RS_CACHE_STAT

CACHE_COUNT	
CACHE_HIT	

AGGR_HIT	
CACHE_REPLACED	
CACHE_MEMORY_USAGE	

Storage

V\$STORAGE

DC_TABLE_FILE_SIZE	
DC_INDEX_FILE_SIZE	
DC_TABLESPACE_DWFILE_SIZE	DWFILE
DC_KV_TABLE_FILE_SIZE	TAGDATA

V\$STORAGE_MOUNT_DATABASES

NAME	
PATH	
BACKUP_TBSID	
BACKUP_SCN	
MOUNTDB	
DB_BEGIN_TIME	
DB_END_TIME	
BACKUP_BEGIN_TIME	
BACKUP_END_TIME	
FLAG	

V\$CACHE

Storage Manager , .

OBJ_COUNT	

V\$CACHE_OBJECTS

OID	
REF_COUNT	
FLAG	()

V\$STORAGE_DC_TABLESPACES

NAME	
ID	
FLAG	Property Flag
REF_COUNT	
DISK_COUNT	

V\$STORAGE_DC_TABLESPACE_DISKS

NAME	
ID	
TABLESPACE_ID	
PATH	
IO_THREAD_COUNT	I/O Thread
IO_JOB_COUNT	I/O Job
VIRTUAL_DISK_COUNT	

V\$STORAGE_DC_DWFILES

Double-write (DW File) .

TBS_ID	
DISK_ID	
FILE	
TABLE_ID	
COLUMN_ID	
PARTITION_ID	
PAGE_ID	
DISK_OFFSET	
DISK_IMAGE_SIZE	
HEAD_CRC32CODE_IMAGE	CRC32 Code Head Image
TAIL_CRC32CODE_IMAGE	CRC32 Code Tail Image
CRC32CODE_PAGE	CRC32 Code Page
HEAD_TIMESTAMP_PAGE	Timestamp Head Page
TAIL_TIMESTAMP_PAGE	Timestamp TailPage

V\$STORAGE_DC_PAGECACHE

Page Cache .

MAX_MEM_SIZE	Page Cache
CUR_MEM_SIZE	Page Cache
PAGE_CNT	
CHECK_TIME	

V\$STORAGE_DC_PAGECACHE_LRU_LST

Page Cache LRU List .

OBJECT_ID	
LEVEL	
PARTITION_ID	
OFFSET	Page Cache Offset
SIZE	
REF_CNT	

Log Table

V\$STORAGE_DC_TABLES

Log Table .

ID	
DATABASE_ID	
CREATE_SCN	(System Change Number)
UPDATE_SCN	(System Change Number)
DDL_REF_COUNT	DDL , .
BEGIN_RID	RID
END_RID	Row ID + 1
BEGIN_META_RID	ID
END_META_RID	ID
END_SYNC_RID	Row ID + 1
FLAG	Table Property Flag
COLUMN_COUNT	
INDEX_COUNT	
INDEX_MIN_END_RID	RID + 1
LAST_ARRIVAL_TIME	_arrival_time
LAST_CHECKPOINT_TIME	Checkpoint
TYPE	

REMAINING_ROW_COUNT	,
KEPT_DURATION	,

V\$STORAGE_DC_TABLES_STAT

Log Table .

TABLESPACE_ID	
TABLE_ID	
COLUMN_ID	
COUNT	

V\$STORAGE_DC_TABLE_COLUMNS

Log Table .

TABLE_ID	
DATABASE_ID	
ID	
FLAG	
SIZE	
PARTITION_VALUE_COUNT	
PAGE_VALUE_COUNT	
CACHE_VALUE_COUNT	
MINMAX_CACHE_SIZE	MIN/MAX
CUR_APPEND_PARTITION_ID	
CUR_CACHE_PARTITION_COUNT	
CUR_MINMAX_CACHE_SIZE	MIN/MAX
END_RID_FOR_DEFAULT_VALUE	RID
DISK_FILE_SIZE	
MEMORY_TOTAL_SIZE	
MEMORY_ALLOC_SIZE	

V\$STORAGE_DC_TABLE_COLUMN_PARTS

Log Table .

TABLE_ID	
DATABASE_ID	
COLUMN_ID	
ID	
FLAG	Property Flag
BEGIN_RID	RID

END_RID	RID
END_SYNC_RID	SYNC RID. RID SYNC RID RID .
MIN_TIME	
MAX_TIME	
MAX_VALUE_COUNT_PER_PARTITION	
MAX_VALUE_COUNT_PER_PAGE	
MAX_PAGE_COUNT	
PAGE_SIZE	
PAGE_COUNT	
COMPRESS_RATIO	.0 .
DISK_FILENAME	
EXTERNAL_PART_SIZE	,
MIN_VALUE	
MAX_VALUE	

V\$STORAGE_DC_TABLE_INDEXES

Log Table .

TABLE_ID	
DATABASE_ID	
ID	
FLAG	Property Flag
TABLE_BEGIN_RID	RID
TABLE_END_RID	RID
BEGIN_RID	RID
END_RID	RID
END_SYNC_RID	RID+1
COLUMN_COUNT	
BEGIN_PART_ID	
END_PART_ID	
FLUSH_REQUEST_COUNT	
MAX_KEY_SIZE	
INDEX_TYPE	
DISK_FILE_SIZE	
LAST_CHECKPOINT_TIME	Checkpoint

LSM Index

V\$STORAGE_DC_LSMINDEX_LEVEL_PARTS

LSM Index .

TABLE ID	
TABLESPACE_ID	
INDEX_ID	
LEVEL	LSM
PARTITION_ID	
BEGIN_RID	RID
END_RID	RID+1
KEY_VALUE_COUNT	
KEY_VALUE_TABLE_SIZE	
KEY_VALUE_TABLE_PAGE_COUNT	
MIN_KEY_VALUE	
MAX_KEY_VALUE	
BITMAP_TABLE_SIZE	
BITMAP_TABLE_PAGE_COUNT	
META_SIZE	
META_PAGE_COUNT	
TOTAL_BUILD_MSEC	
KEYVAL_BUILD_MSEC	KeyValue Mode ,
BITMAP_BUILD_MSEC	Bitmap Mode ,

V\$STORAGE_DC_LSMINDEX_LEVEL_PARTS_CACHE

LSM Index .

TABLESPACE_ID	
TABLE_ID	
INDEX_ID	
LEVEL	LSM
PARTITION_ID	
BEGIN_RID	RID
END_RID	RID+1
KEY_VALUE_COUNT	
KEY_VALUE_TABLE_SIZE	
KEY_VALUE_TABLE_PAGE_COUNT	
BITMAP_TABLE_SIZE	
BITMAP_TABLE_PAGE_COUNT	
META_SIZE	
META_PAGE_COUNT	

MEMORY_SIZE	
MEMORY_SIZE_RBTREE	Redblack Tree

V\$STORAGE_DC_LSMINDEX_LEVELS

LSM .

TABLE_ID	
DATABASE_ID	
INDEX_ID	
LEVEL	
BEGIN_RID	RID
END_RID	RID+1
META_BEGIN_RID	RID
META_END_RID	RID
DELETE_END_RID	RID +1

V\$STORAGE_DC_LSMINDEX_FILES

LSM Index .

TABLE_ID	
DATABASE_ID	
INDEX_ID	
LEVEL	LSM
PARTITION_ID	
BEGIN_RID	RID
END_RID	RID+1
PATH	

V\$STORAGE_DC_LSMINDEX_AGER_JOBS

LSM Index Ager .

TABLE_ID	
INDEX_ID	
LEVEL	LSM
BEGIN_RID	RID
END_RID	RID+1
STATE	Index Ager

Volatile Table

V\$STORAGE_DC_VOLATILE_TABLE

Volatile Table .

MAX_MEM_SIZE	Volatile Tablespace
CUR_MEM_SIZE	Volatile Tablespace

Tag Table

V\$STORAGE_TAG_TABLES

Tagdata Table .

ID	
TABLE_BEGIN_RID	RID
TABLE_END_RID	RID
WRITE_END_RID	RID
DISK_INDEX_END_RID	RID
MEMORY_INDEX_END_RID	RID
EXT_ROW_COUNT	VARCHAR
EXT_WRITE_COUNT	VARCHAR
INDEX_STATE	<ul style="list-style-type: none">• IDLE: , .• PROGRESS:• IOWAIT: .• PENDING:• SHUTDOWN: . DELETE , DROP .• ABNORMAL:
DELETE_STATE	DELETE . DELETE IDLE . <ul style="list-style-type: none">• PROGRESS:• IOWAIT: .• PENDING: /• SHUTDOWN: . DELETE .• ABNORMAL:

V\$STORAGE_TAG_CACHE

Tagdata Table .

CATEGORY	
USED_MEMORY	
TAGMAP_CNT	()
TAGMAP_HIT	
TAGMAP_MISS	

TAGMAP_FLUSHOUT	
TAGMAP_COLDREAD	
TAGMAP_MEMORY_WAIT	
TAGMAP_IO_WAIT	
BLOCK_COUNT	
CACHE_HIT	
CACHE_MISS	
FLUSHOUT	
COLDREAD	
MEMORY_WAIT	
IO_WAIT	

V\$STORAGE_TAG_TABLE_FILES

Tagdata Table .

TABLE_ID	
FILE_ID	
STATE	<ul style="list-style-type: none"> • COMPLETE: , • INDEXING: . • FILLED: , • PARTIAL: . .
MIN_DATE	
MAX_DATE	

Tag Rollup

V\$ROLLUP

Tagdata Rollup .

ID	Rollup ID
ROLLUP_TABLE_NAME	Rollup
SOURCE_TABLE_NAME	Rollup
END_RID	Source Table RID
ENABLED	Rollup
LAST_INSERTED_ROW_COUNT	

V\$ROLLUP_STATUS

Tagdata Rollup .

--	--

SRC_TABLE	Rollup
ROLLUP_TABLE	Rollup
ENABLED	Rollup
ROLLUP_END_RID	Rollup RID
LAST_ELAPSED_MSEC	Rollup

Stream

V\$STREAMS

NAME	stream . .
LAST_EX_TIME	STREAM
TABLE_NAME	STREAM
END_RID	STREAM RID
STATE	STREAM
QUERY_TXT	STREAM
ERROR_MSG	
FREQUENCY	.0 0 .

License

V\$LICENSE_INFO

INSTALL_DATE	
TYPE	
POLICY	
CUSTOMER	
ISSUE_DATE	
ID	ID
EXPIRY_DATE	
SIZE_LIMIT	
ADDENDUM	

VIOLATION_ACTION	
VIOLATION_LIMIT	()
STOP_ACTION	
RESET_FLAG	()

V\$LICENSE_STATUS

USER_DATA_PER_DAY	
PREVIOUS_CHECK_DATE	
VIOLATION_COUNT	
STOP_ENABLED	()

Cluster

V\$NODE_STATUS

Cluster Node . 1 .

NODETYPE	Node . Type . <ul style="list-style-type: none"> • Broker • Warehouse
STATE	Node

V\$DDL_INFO

Cluster DDL .

SEQUENCENUMBER	DDL
TIME	DDL
VALUE	DDL ()
CLIENT	
BROKER	Leader Broker Node
USER	
SQL	DDL

V\$REPLICATION

Replication .

HOSTNAME	Replication Node Hostname
MODE	()

STATE	Node
ADDR	Replication Manager
PORT_NO	Replication Manager
MAX_SENDER_COUNT	Sender
RUN_SENDER_COUNT	Sender

V\$REPL_SENDER

Replication , Sender .

HOSTNAME	Replication Node Hostname
ID	Sender
STATUS	Sender Thread
PAYLOAD_RECV_COUNT	Sender
PAYLOAD_RECV_BYTES	Sender
QUEUE_REMAIN_COUNT	Receive Queue
NET_SEND_COUNT	
NET_SEND_SIZE	
NET_RECV_COUNT	
NET_RECV_SIZE	

V\$REPL_SENDER_META

Replication , Sender .

HOSTNAME	Replication Node Hostname
SENDER_ID	Sender
TABLE_ID	
TABLE_TYPE	
BEGIN_RID	RID
END_RID	RID

V\$REPL_RECEIVER

Replication , Receiver .

HOSTNAME	Replication Node Hostname
STATUS	Receiver Thread
PAYLOAD_RECV_COUNT	Sender
PAYLOAD_RECV_BYTES	Sender
QUEUE_REMAIN_COUNT	Receive Queue
NET_SEND_COUNT	
NET_SEND_SIZE	

NET_RECV_COUNT	
NET_RECV_SIZE	

V\$REPL_RECEIVER_META

Replication , Receiver .

HOSTNAME	Replication Node Hostname
TABLE_ID	
TABLE_TYPE	
BEGIN_RID	RID
END_RID	RID

V\$REPL_READER

Replication , Reader .

HOSTNAME	Replication Node Hostname
SENDER_ID	Sender
ID	Reader
STATUS	Reader Thread
FETCH_COUNT	FETCH

V\$REPL_READER_META

Replication , Reader .

HOSTNAME	Replication Node Hostname
SENDER_ID	Sender
ID	Reader
TABLE_ID	
TABLE_TYPE	
BEGIN_RID	RID
END_RID	RID

V\$REPL_WRITER

Replication , Writer .

HOSTNAME	Replication Node Hostname
ID	Writer
STATUS	Writer Thread
APPEND_COUNT	APPEND

V\$REPL_WRITER_META

Replication , Writer .

HOSTNAME	Replication Node Hostname
ID	Writer
TABLE_ID	
TABLE_TYPE	
BEGIN_RID	RID
END_RID	RID

Others

V\$TABLES

V\$ Virtual Table .

NAME	
TYPE	
DATABASE_ID	
ID	
USER ID	
COLCOUNT	

V\$COLUMNS

Virtual Table .

NAME	
TYPE	
DATABASE_ID	
ID	
LENGTH	
TABLE_ID	
FLAG	
PART_PAGE_COUNT	()
PAGE_VALUE_COUNT	()
MINMAX_CACHE_SIZE	()
MAX_CACHE_PART_COUNT	()