

Tibero

참조 안내서

Tibero 6



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안내서에 대하여

안내서의 대상

본 안내서는 Tibero[®](이하 Tibero)를 사용하는 데 있어 필요한 초기화 파라미터, 데이터 사전, 정적 뷰, 동적 뷰의 개념과 사용법을 참조하려는 데이터베이스 관리자(Database Administrator, 이하 DBA), 시스템 관리자, 애플리케이션 프로그램 개발자를 대상으로 기술한다.

안내서의 전제 조건

본 안내서를 원활히 이해하기 위해서는 다음과 같은 사항을 미리 알고 있어야 한다.

- 데이터베이스의 이해
- DB의 이해
- SQL의 이해

안내서의 제한 조건

본 안내서는 Tibero를 실무에 적용하거나 운용하는 데 필요한 모든 사항을 포함하고 있지 않다. 따라서 설치, 환경설정 등 운용 및 관리에 대해서는 각 제품 안내서를 참고하기 바란다.

참고

Tibero의 설치 및 환경설정에 관한 내용은 "Tibero 설치 안내서"를 참고한다.

안내서 구성

Tibero 참조 안내서는 총 4개의 장과 Appendix로 이루어져 있다.

각 장의 주요 내용은 다음과 같다.

- 제1장: Introduction to Initialization Parameters

초기화 파라미터의 개념을 간략히 설명하고 Tibero가 제공하는 초기화 파라미터를 기술한다.

- 제2장: 데이터 사전

데이터 사전에 대한 개념과 구조를 설명하고 데이터 사전의 참조 및 갱신을 기술한다.

- 제3장: Static View

Tibero의 데이터 사전에서 제공하는 정적 뷰를 간략히 설명하고 이를 구성하는 컬럼을 기술한다.

- 제4장: Dynamic View

Tibero의 데이터 사전에서 제공하는 동적 뷰를 간략히 설명하고 이를 구성하는 컬럼을 기술한다.

- Appendix A.: 초기화 파라미터의 설정 예제

Tibero를 설치한 후 기본적으로 설정되는 초기화 파라미터를 기술한다.

안내서 규약

표기	의미
<<AaBbCc123>>	프로그램 소스 코드의 파일명
<Ctrl>+C	Ctrl과 C를 동시에 누름
[Button]	GUI의 버튼 또는 메뉴 이름
진하게	강조
" "(따옴표)	다른 관련 안내서 또는 안내서 내의 다른 장 및 절 언급
'입력항목'	화면 UI에서 입력 항목에 대한 설명
하이퍼링크	메일 계정, 웹 사이트
>	메뉴의 진행 순서
+----	하위 디렉터리 또는 파일 있음
----	하위 디렉터리 또는 파일 없음
<u>참고</u>	참고 또는 주의사항
<u>주의</u>	주의할 사항
[그림 1.1]	그림 이름
[예 1.1]	예제 이름
AaBbCc123	Java 코드, XML 문서
[command argument]	옵션 파라미터
< xyz >	'<'와 '>' 사이의 내용이 실제 값으로 변경됨
	선택 사항. 예) A B: A나 B 중 하나
...	파라미터 등이 반복되어서 나옴
\${ }	환경변수

안내서 변경이력

[illegible]

시스템 사용 환경

	요구 사항
Platform	HP-UX 11i (IA64)
	Solaris (Solaris 10)
	AIX (PPC 5L/AIX 5.3)
	GNU (X86, 64, IA64)
	Linux kernel 2.6 이상
	Windows(x86) 32bit/64bit
Hardware	최소 2.5GB 하드디스크 공간
	1GB 이상 메모리 공간
Compiler	PSM (C99 지원 필요)
	tbESQL/C (C99 지원 필요)

관련 안내서

안내서	설명
Tibero 설치 안내서	설치 과정에 필요한 시스템 요구사항과 설치 및 제거 방법을 기술한 안내서이다.
Tibero tbCLI 안내서	Call Level Interface인 tbCLI의 개념과 구성요소, 프로그램 구조를 소개하고 tbCLI 프로그램을 작성하는 데 필요한 데이터 타입, 함수, 에러 메시지를 기술한 안내서이다.
Tibero 애플리케이션 개발자 안내서	각종 애플리케이션 라이브러리를 이용하여 애플리케이션 프로그램을 개발하는 방법을 기술한 안내서이다.
Tibero External Procedure 안내서	External Procedure를 소개하고 이를 생성하고 사용하는 방법을 기술한 안내서이다.
Tibero JDBC 개발자 안내서	Tibero에서 제공하는 JDBC 기능을 이용하여 애플리케이션 프로그램을 개발하는 방법을 기술한 안내서이다.
Tibero tbESQL/C 안내서	C 프로그래밍 언어를 사용해 데이터베이스 작업을 수행하는 각종 애플리케이션 프로그램을 작성하는 방법을 기술한 안내서이다.
Tibero tbESQL/COBOL 안내서	COBOL 프로그래밍 언어를 사용해 데이터베이스 작업을 수행하는 각종 애플리케이션 프로그램을 작성하는 방법을 기술한 안내서이다.
Tibero tbPSM 안내서	저장 프러시저 모듈인 tbPSM의 개념과 문법, 구성요소를 소개하고, 프로그램을 작성하는 데 필요한 제어 구조, 복합 타입, 서브프로그램, 패키지 및 SQL 문장을 실행하고 에러를 처리하는 방법을 기술한 안내서이다.
Tibero tbPSM 참조 안내서	저장 프러시저 모듈인 tbPSM의 패키지를 소개하고, 이러한 패키지에 포함된 각 프러시저와 함수의 프로토타입, 파라미터, 예제 등을 기술한 참조 안내서이다.
Tibero 관리자 안내서	Tibero의 동작과 주요 기능의 원활한 수행을 보장하기 위해 DBA가 알아야 할 관리 방법을 논리적 또는 물리적 측면에서 설명하고, 관리를 지원하는 각종 도구를 기술한 안내서이다.
Tibero tbAdmin 안내서	SQL/PSM 처리와 DBA를 위한 시스템 관리 기능을 제공하는 GUI 기반의 툴인 tbAdmin을 소개하고, 설치 및 사용 방법을 기술한 안내서이다.
Tibero 유틸리티 안내서	데이터베이스와 관련된 작업을 수행하기 위해 필요한 유틸리티의 설치 및 환경설정, 사용 방법을 기술한 안내서이다.

안내서	설명
Tibero TAS 안내서	Tibero Active Storage(TAS)를 사용해서 Tibero의 파일을 관리하고자 하는 관리자를 대상으로 기술한 안내서이다.
Tibero 에러 참조 안내서	Tibero를 사용하는 도중에 발생할 수 있는 각종 에러의 원인과 해결 방법을 기술한 안내서이다.
Tibero SQL 참조 안내서	데이터베이스 작업을 수행하거나 애플리케이션 프로그램을 작성할 때 필요한 SQL 문장을 기술한 참조 안내서이다.

제1장 Introduction to Initialization Parameters

1.1. Overview

An **initialization parameter** describes a Tibero instance and database configuration. It is provided with a text file and required to create a Tibero.

An **initialization parameter file** is a text file, with a filename in the form XX.tip (where XX is the name of the database), needed when creating a database. It can be edited using a document editor provided with the operating system. Once the initialization parameter file is modified, the database must be restarted to apply the modification to the entire system.

However, not all initialization parameters require the restarting of the database after their modification. Some parameters can be modified while being used by an instance. These parameters are applied only to the current instance, not the initialization parameter file.

The following is the list of information that can be configured in the initialization parameter file.

- Shared memory area
- Default value for the database and instances
- Database limits
- Location of the control file
- Location of the archive file
- Location of the trace file

Below is an example of the initialization parameter file.

```
AUTHENTICATION_TIMEOUT = 0  
CLUSTER_DATABASE = N EX_WORKAREA_CACHE_SIZE = 100
```

1.2. Class Attributes

This section explains the class attributes necessary for users to understand the information configured in the initialization parameter file.

Group	Class	Description
Static/Dynamic	Static	A parameter that cannot be modified during system operation.
	Dynamic	A parameter that can be modified during system operation.
Persistent/Adjustable	Persistent	A parameter that cannot be modified after database creation.
	Adjustable	A parameter that can be modified after database creation.
Mandatory/Optional	Mandatory	A parameter required to start up a system. If these parameter are not defined in the initialization parameter file, the system cannot be booted.
	Optional	A parameter that uses a default value if not defined in the initialization parameter.
System/Session	System	A parameter that the entire system shares.
	Session	A parameter that can be configured separately for each session.

1.3. Initialization Parameter

This section describes initialization parameters in alphabetical order.

1.3.1. ACF_CMPT_CNT

ACF_CMPT_CNT specifies the number of cluster message processing threads used by the ACSD (Active Cluster Service Deamon) process in parallel.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MAX(32, MIN(get_ncpu() * 3, 160))
Class	Optional, Persistent, Static, System
Range	

1.3.2. ACTIVE_SESSION_HISTORY

ACTIVE_SESSION_HISTORY determines whether to gather statistics on active sessions.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.3. ACTIVE_SESSION_TIMEOUT

The maximum time, in seconds, that a session will remain active and wait for a client request. If there is no client request during this time, the server will disconnect the session. If this is set to 0, the server will never disconnect the session.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.4. ACT_LOG_DEST

ACT_LOG_DEST specifies the directory where activity log files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.5. ACT_LOG_FILE_SIZE

ACT_LOG_FILE_SIZE specifies the maximum size of each activity log file. If a single log file grows more than the size specified in this parameter, the current log file will be closed and a new file will be created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	104857600
Class	Optional, Adjustable, Static, System
Range	100K - 1G

1.3.6. AS_ADDR

AS_ADDR specifies the network address of the Active Storage instance to be accessed by the database instance.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"127.0.0.1"
Class	Optional, Adjustable, Static, System
Range	

1.3.7. AS_ALLOW_ONLY_RAW_DISKS

AS_ALLOW_ONLY_RAW_DISKS specifies whether the Active Storage instance will only discover raw devices.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.8. AS_DISKSTRING

AS_DISKSTRING specifies the absolute path of the disks that the Active Storage instance discovers.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	AS_DISKSTRING = discovery_string [, discovery_string] ...

1.3.9. AS_PORT

AS_PORT specifies the TCP port number of the Active Storage instance to be accessed by the database instance.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Static, System
Range	1024 - 65535

1.3.10. AS_WTHR_CNT

AS_WTHR_CNT specifies the number of threads used for Active Storage instance rebalancing. Increasing the number of threads increases rebalancing speeds but consumes more system resources.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Adjustable, Static, System
Range	

1.3.11. AUDIT_FILE_DEST

AUDIT_FILE_DEST specifies the directory where AUDIT TRAIL files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.12. AUDIT_FILE_SIZE

AUDIT_FILE_SIZE specifies the maximum size of each AUDIT TRAIL file. If a single AUDIT TRAIL file grows more than the size specified in this parameter, the current audit trail file will be closed and a new file will be created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	104857600
Class	Optional, Adjustable, Static, System
Range	100K - 1G

1.3.13. AUDIT_LOG_TOTAL_SIZE_LIMIT

AUDIT_LOG_TOTAL_SIZE_LIMIT specifies the maximum total file size that can be stored in the directory set in AUDIT_LOG_DEST. Use this parameter to prevent database log files from growing endlessly by deleting the oldest files when the file size exceeds the specified value and hence reusing the database space.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	300 * 1024 * 1024

Property	Description
Class	Optional, Adjustable, Dynamic, System
Range	100K -

1.3.14. AUDIT_SYS_OPERATIONS

AUDIT_SYS_OPERATIONS determines whether to enables auditing for the SYS user.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.15. AUDIT_TRAIL

AUDIT_TRAIL specifies the method of auditing when the database auditing function is enabled.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"NONE"
Class	Optional, Adjustable, Dynamic, System
Range	NONE DB DB_EXTENDED OS

1.3.16. AUTHENTICATION_TIMEOUT

AUTHENTICATION_TIMEOUT specifies the timeout (in seconds) for client authentication when a client initializes a session. If a client has not completed the authentication protocol in the time specified, the server will close the connection.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Adjustable, Dynamic, System
Range	0 - 100

1.3.17. AUTO_COALESCE

Specifies the automatic coalesce. 0: Do not use. 1: Only LOB indexes. 2: All indexes.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	2
Class	Optional, Adjustable, Dynamic, System
Range	0~2

1.3.18. AUTO_COALESCE_INTERVAL

AUTO_COALESCE_INTERVAL specifies the auto coalesce interval. The unit is 0.1 second.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	100
Class	Optional, Adjustable, Dynamic, System
Range	0 ~ 3600000 (OFF / 0.1 second ~ 100 hours)

1.3.19. BATCHUPDATE_MODE

Set the batch update operation mode.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.20. BATCH_INSERT_ROWCNT_THRESHOLD

BATCH_INSERT_ROWCNT_THRESHOLD specifies the number of rows for inserting the same information into multiple tables and indexes using the BATCH INSERT protocol.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	5
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.21. BIND_VARIABLE_CAPTURE

determines whether to enable Bind Variable Capture.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.22. BIND_VARIABLE_CAPTURE_ALLOC_COUNT

specifies the number of slave allocators for bind variable capture.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4
Class	Optional, Adjustable, Static, System
Range	

1.3.23. BIND_VARIABLE_CAPTURE_INTERVAL

specifies the time interval, in seconds, at which Bind Variable Capture will execute.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	600
Class	Optional, Adjustable, Dynamic, System
Range	0 ~ 86400

1.3.24. BIND_VARIABLE_CAPTURE_KEEP_FIRST

determines whether to keep first bind variables of plans

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.25. BIND_VARIABLE_CAPTURE_MAX_COUNT

specifies the maximum number of bind variables that Bind Variable Capture can store.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1000
Class	Optional, Adjustable, Dynamic, System
Range	10 ~ 1000000

1.3.26. BIND_VARIABLE_CAPTURE_MAX_VAR_COUNT

specifies the maximum number of bind variables that can be captured from a query.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	512
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.27. BIND_VARIABLE_CAPTURE_POOL_PCTDEL

a percentage of variables to be deleted from Bind Variable Capture pool.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Adjustable, Static, System
Range	

1.3.28. BIND_VARIABLE_CAPTURE_POOL_SIZE

specifies the size of pool for Bind Variable Capture.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4*1024*1024
Class	Optional, Adjustable, Static, System
Range	

1.3.29. BLOCK_CHANGE_TRACKING

BLOCK_CHANGE_TRACKING enables block change tracking for incremental backups.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	
Syntax	file

1.3.30. BOOT_WITH_AUTO_DOWN_CLEAN

BOOT_WITH_AUTO_DOWN_CLEAN specifies whether or not to automatically enable the tbdwn clean process during tbboot.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.31. CALLSTACK_DUMP_DEST

CALLSTACK_DUMP_DEST specifies the directory to which callstack dump files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	

1.3.32. CCC_CATH_CNT

CCC_CATH_CNT specifies the number of asynchronous cache task threads used by the CCC(Cluster Cache Control) in parallel.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1
Class	Optional, Persistent, Static, System
Range	

1.3.33. CCC_MASTERING_UNIT

CCC_MASTERING_UNIT specifies the number of continuous blocks to be specified in a single Master of the CCC (Cluster Cache Control) module. A base of 2 will be raised to the power of the integer specified in this parameter.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	7
Class	Optional, Persistent, Static, System
Range	

1.3.34. CCC_RECL_MAX_RESOURCES

CCC_RECL_MAX_RESOURCES specifies the maximum number of CCC resource blocks to be maintained in memory.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	$(TB_CEIL_DIV((_CCC_RECL_MAX_DB_CACHE_SIZE / DB_BLOCK_SIZE), 100) * _CCC_RECL_MAX_RESOURCES_RATIO)$
Class	Optional, Persistent, Static, System
Range	

1.3.35. CCC_RSBTBL_SIZE

CCC_RSBTBL_SIZE specifies the number of hash table buckets used for the CCC resource block. The number of blocks must be a square of 2.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	$TB_CEIL(DB_BLOCK_HASH_BUCKETS/8, 256)$
Class	Optional, Adjustable, Static, System
Range	

1.3.36. CC_CU_BLKCNT

CC_CU_BLKCNT specifies the maximum CC unit size in blocks.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4
Class	Optional, Adjustable, Dynamic, System
Range	4 - 32

1.3.37. CC_CU_PCTUSE

CC_CU_PCTUSE specifies the percentage of a single block that can be used in a compression unit. This will be adjusted while loading.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	99
Class	Optional, Adjustable, Dynamic, Session
Range	0 - 99

1.3.38. CC_EXPECTED_RATE

CC_EXPECTED_RATE specifies the percentage of a single block that can be used for row data. This will be adjusted while loading.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	25
Class	Optional, Adjustable, Dynamic, Session
Range	1 - 100

1.3.39. CC_TYPICAL_ROW_SIZE

CC_TYPICAL_ROW_SIZE specifies the size of a typical row in a compression unit.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	100
Class	Optional, Adjustable, Dynamic, Session
Range	3 - 1000

1.3.40. CERTIFICATE_FILE

CERTIFICATE_FILE specifies the location of the certificate files. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	
Syntax	CERTIFICATE_FILE=filename[:filename [...]]

1.3.41. CLOSE_REMOTE_SESSION_ON_SESSION_RESET

Determines whether to close remote sessions that are connected using a database link when resetting sessions (logical disconnection).

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.42. CLUSTER_DATABASE

CLUSTER_DATABASE determines whether to configure TAC (Tibero Active Cluster) or not.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Persistent, Static, System
Range	

1.3.43. CM_ENABLE_FAST_NET_ERROR_DETECTION

CM_ENABLE_FAST_NET_ERROR_DETECTION specifies whether to turn on the function that rapidly recognizes the status change of other CM by detecting a network error.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.44. CM_FENCE

CM_FENCE determines whether to execute the CM fence daemon. To use this option, CM must be started with root privileges.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Persistent, Static, System
Range	

1.3.45. CM_GUARD_LOG_DEST

Save location of the TBCM Guard log file. The location must be set as an absolute path in the local disk.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.46. CM_HEARTBEAT_EXPIRE

CM_HEARTBEAT_EXPIRE specifies the length of the heartbeat expire used to control TBCM. The length must be a square of [CM_TIME_UNIT](#). Heartbeat expire is the reference time that TBCM uses to detect possible failures in other nodes.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	300
Class	Optional, Adjustable, Static, System
Range	

1.3.47. CM_LOG_DEST

CM_LOG_DEST specifies the directory to which TBCM log files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.48. CM_LOG_FILE_SIZE

CM_LOG_FILE_SIZE specifies the maximum size of each TBCM log file. If a single log file grows more than the size specified in this parameter, the current log file will be closed and a new file will be created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10485760
Class	Optional, Adjustable, Static, System
Range	100K - 1G

1.3.49. CM_LOG_TOTAL_SIZE_LIMIT

CM_LOG_TOTAL_SIZE_LIMIT specifies the maximum total file size of logs files that can be stored in the directory set in CM_LOG_DEST. Use this parameter to prevent database log files from growing endlessly by deleting the oldest files when the file size exceeds the specified value and hence reusing the database space.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	300 * 1024 * 1024
Class	Optional, Adjustable, Dynamic, System
Range	100K - INT64_MAX

1.3.50. CM_MODE_OBSERVER

CM을 observer mode로 띄울지 말지를 결정하는 파라미터

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.51. CM_NAME

CM_NAME specifies the name which identifies a local node in the cluster environment that consists of TBCM. The name must not be the same as the name of another node and is limited to 31 bytes in length. And a semicolon cannot be used in names. If not specified, it is set to tbcm by default.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Mandatory, Adjustable, Static, System

Property	Description
Range	

1.3.52. CM_NET_EXPIRE_MARGIN

CM_NET_EXPIRE_MARGIN specifies the network heartbeat expire for controlling CM. The value must be multiples of CM_TIME_UNIT.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	5
Class	Optional, Adjustable, Static, System
Range	

1.3.53. CM_OBSERVER_PORT

CM을 observer mode로 띄웠을 때 사용할 listen port

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Persistent, Static, System
Range	1024 - 65535

1.3.54. CM_PORT

CM_PORT specifies the port number to be used by TBCM. If two or more instances are running on a machine, the port number must be different from other instance.

- Parameter Format

Property	Description
Parameter Type	Integer

Property	Description
Default Value	LISTENER_PORT + 3
Class	Optional, Adjustable, Static, System
Range	1024 - 65535

1.3.55. CM_RESOURCE_FILE

CM_RESOURCE_FILE specifies the path to the file that contains information about the resources registered in CM. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	filename
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.56. CM_RESOURCE_FILE_BACKUP

CM_RESOURCE_FILE_BACKUP specifies the path to back up the file in the CM_RESOURCE_FILE path. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	filename
Default Value	""
Class	Optional, Persistent, Static, System
Range	

1.3.57. CM_RESOURCE_FILE_BACKUP_INTERVAL

CM_RESOURCE_FILE_BACKUP_INTERVAL specifies the interval (in minutes) for backing up the file in the CM_RESOURCE_FILE path to CM_RESOURCE_FILE_BACKUP path. If set to 0, backup is disabled.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Persistent, Static, System
Range	0 - 1440

1.3.58. CM_TIME_UNIT

CM_TIME_UNIT specifies the length of the time tick to be used to control TBCM. Other time-related parameters are represented in a multiple valued set in CM_TIME_UNIT and specified based on a 0.1 second time base.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Adjustable, Static, System
Range	

1.3.59. CM_UI_PORT

CM_UI_PORT specifies the port information that CM uses to receive user commands.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Mandatory, Persistent, Static, System
Range	1024 - 65535

1.3.60. CM_VIP_FAILOVER_BASED_ON_SVC_STATUS

vip를 alias하는 기준이 service instance가 up인지 down인지 정하는 parameter Y면 service instance가 up 되어야 vip alias됨 (기존과 같은 방식)

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.61. CM_WATCHDOG_EXPIRE

CM_WATCHDOG_EXPIRE specifies the expiration period used when the watchdog function between RDBMS and TBCM is enabled. If TBCM does not run for the specified time, RDBMS will be automatically terminated. The value set in this parameter should be smaller than the one specified in CM_HEARTBEAT_EXPIRE.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	290
Class	Optional, Persistent, Static, System
Range	

1.3.62. COMMIT_FLUSH_REQUEST

COMMIT_FLUSH_REQUEST determines whether to flush the logs after every transaction commit or not.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.63. COMMIT_FLUSH_WAIT

COMMIT_FLUSH_WAIT determines whether database commits wait for log flushes or not.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.64. COMMIT_POINT_STRENGTH

COMMIT_POINT_STRENGTH specifies the value determining the commit point site in a distributed transaction.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1
Class	Optional, Persistent, Static, System
Range	0 - 255

1.3.65. CONTROL_FILES

CONTROL_FILES specifies the location of the control files. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Mandatory, Adjustable, Static, System
Range	1 - 8 files
Syntax	CONTROL_FILES=filename[:filename [...]]

1.3.66. CPU_COUNT

CPU_COUNT specifies the number of CPUs allowed for this instance.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Static, System
Range	

1.3.67. CREATE_STORED_OUTLINES

Determines whether to create outline.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.68. CTHR_CHECK_CONNECTION_INTERVAL

CTHR_CHECK_CONNECTION_INTERVAL specifies the time interval (in seconds) that CTHR checks client connections.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	60
Class	Optional, Adjustable, Dynamic, System
Range	1 - 120 (s)

1.3.69. CURRENT_SESSION_TEMP_TS

CURRENT_SESSION_TEMP_TS specifies the name of the temporary tablespace that the current session is using. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.70. CURSOR_SHARING

CURSOR_SHARING determines the kind of SQL statement which can share the same cursor. EXACT: Cursors can be shared only when the SQL text matches exactly. FORCE: Setting this parameter to FORCE forces similar SQL statements to share cursors as long as only their literals are different.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"EXACT"
Class	Optional, Adjustable, Dynamic, Session
Range	EXACT FORCE

1.3.71. CWS_RECL_MAX_RESOURCES

CWS_RECL_MAX_RESOURCES specifies the maximum number of CWS (Cluster Wait-lock Service) resource blocks to be maintained in memory.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	$(TB_CEIL_DIV(_WLOCK_POOL_INIT_SIZE, 100) * _CWS_RECL_MAX_RESOURCES_RATIO)$
Class	Optional, Persistent, Static, System

Property	Description
Range	

1.3.72. CWS_RSBTBL_SIZE

CWS_RSBTBL_SIZE specifies the number of hash table buckets used for the CWS resource block. The number of buckets must be a square of 2.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	(_WLOCK_BUCKET_PER_SET * _WLOCK_BUCKETSET_CNT)
Class	Optional, Adjustable, Static, System
Range	

1.3.73. DBLINK_CONN_TIMEOUT

Number of seconds for a CLI connect to timeout to a DB that will be connected through a DB link.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	_DBLINK_CONN_TIMEOUT
Class	Optional, Adjustable, Dynamic, Session
Range	0 - INT32_MAX

1.3.74. DBLINK_CONN_VALIDATION_SKIP_INTERVAL

Interval to check whether a DB link is valid after the last message to a connected DB has been sent through a DB link.

- Parameter Format

Property	Description
Parameter Type	Integer

Property	Description
Default Value	0
Class	Optional, Adjustable, Dynamic, Session
Range	0 - INT32_MAX

1.3.75. DBLINK_QUERY_TIMEOUT

Number of seconds to wait for a response after sending SQL to a DB that is connected through a DB link.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	_DBLINK_QUERY_TIMEOUT
Class	Optional, Adjustable, Dynamic, Session
Range	0 - INT32_MAX

1.3.76. DBMS_LOG_DEST

DBMS_LOG_DEST specifies the directory where the database log files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.77. DBMS_LOG_FILE_SIZE

DBMS_LOG_FILE_SIZE specifies the maximum size of each database log file. If a single log file grows more than the size specified in this parameter, the current log file will be closed and a new file will be created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	104857600
Class	Optional, Adjustable, Static, System
Range	100K - 1G

1.3.78. DBMS_LOG_TOTAL_SIZE_LIMIT

DBMS_LOG_TOTAL_SIZE_LIMIT specifies the maximum total file size that can be stored in the directory set in DBMS_LOG_DEST. Use this parameter to prevent database log files from growing endlessly by deleting the oldest files when the file size exceeds the specified value and hence reusing the database space.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	300 * 1024 * 1024
Class	Optional, Adjustable, Dynamic, System
Range	100K -

1.3.79. DBWR_CNT

DBWR_CNT specifies the number of processes that use database blocks on disk.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	_DBWR_USE_AIO ? 1 : MAX(1, get_ncpu()/4)
Class	Optional, Adjustable, Static, System
Range	1 - 1024

1.3.80. DB_BLOCK_SIZE

DB_BLOCK_SIZE specifies the size of database blocks.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	8 * 1024
Class	Optional, Persistent, Static, System
Range	2K - 32K

1.3.81. DB_CACHE_SIZE

DB_CACHE_SIZE specifies the size of the database cache buffer.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	CLUSTER_DATABASE ? TB_CEIL(TOTAL_SHM_SIZE * 1 / 2, 1) : TB_CEIL(TOTAL_SHM_SIZE * 2 / 3, 1)
Class	Optional, Adjustable, Static, System
Range	360K -

1.3.82. DB_CREATE_FILE_DEST

DB_CREATE_FILE_DEST specifies the directory where the data files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Static, System
Range	

1.3.83. DB_FILE_MULTIBLOCK_READ_COUNT

DB_FILE_MULTIBLOCK_READ_COUNT specifies the number of blocks which can be read in one I/O operation.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	$\text{MAX}(1, \text{MIN}(\text{DB_CACHE_SIZE} / \text{DB_BLOCK_SIZE} / \text{_DB_BLOCK_LRU_LATCHES} * \text{_DB_BLOCK_MAX_SCAN_PCT} / 100 / 2, 64))$
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.84. DB_KEEP_CACHE_SIZE

DB_KEEP_CACHE_SIZE specifies the size of the KEEP buffer pool.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Static, System
Range	

1.3.85. DB_MULTIBLOCK_PREFETCH_COUNT

DB_MULTIBLOCK_PREFETCH_COUNT specifies prefetch count

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.86. DB_NAME

DB_NAME specifies the name of the database. It must correspond to the name specified in the DB_NAME parameter of the \$TB_SID.tip file. If a database name is not specified, the database will be created with the TB_SID environment variable. When the system is restarted after database creation, an error may occur if the specified database name does not match the one specified in DB_NAME of the \$TB_SID.tip file.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Mandatory, Persistent, Static, System
Range	Limited to 40 characters

1.3.87. DB_RECYCLE_CACHE_SIZE

DB_RECYCLE_CACHE_SIZE specifies the size of the RECYCLE buffer pool.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	DB_CACHE_SIZE * _CACHE_BATCH_AREA_PCT / 100.0
Class	Optional, Adjustable, Static, System
Range	

1.3.88. DD_CACHE_MAX

DD_CACHE_MAX specifies the maximum size of DD cache (automatically adjusted). Deprecated.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MAX(10 << 20, (TOTAL_SHM_SIZE - DB_CACHE_SIZE) * 0.3)
Class	Optional, Adjustable, Dynamic, System
Range	10M -

1.3.89. DEFAULT_SEQ_CACHE_SIZE

DEFAULT_SEQ_CACHE_SIZE specifies the default value of sequence cache size.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	20
Class	Optional, Adjustable, Dynamic, System
Range	2 - 99999999

1.3.90. DF_HDRBLK_START_OFFSET

DF_HDRBLK_START_OFFSET specifies the data file's start offset.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Persistent, Static, System
Range	0 - 65536

1.3.91. DISK_PATH

Sets the paths to AS disks. Use absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	
Syntax	DISK_PATH=pathname[:pathname [...]]

1.3.92. DONT_USE_FILE_BUFFERING

DONT_USE_FILE_BUFFERING determines whether to use file cache in Windows.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.93. DPL_INDEX_METHOD

DPL_INDEX_METHOD specifies the DPL (Direct Path Loading) operation mode in the table with the index.

1: NORMAL INSERT, index keys are inserted one by one. 2: MULTI INSERT, multiple index keys are inserted at a time. 3: FAST BUILD, index keys are retrieved in key sequence and inserted per unit of block.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	2
Class	Optional, Adjustable, Dynamic, Session
Range	1 2 3

1.3.94. ENCRYPTION_WALLET_FILE

ENCRYPTION_WALLET_FILE specifies the location of wallet files used by TDE only. It must be specified as an absolute path. deprecated

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

Property	Description
Syntax	ENCRYPTION_WALLET_FILE=filename[:filename [...]]

1.3.95. EVENT_TRACE

EVENT_TRACE determines the method for recording binary trace log. If this parameter is set to 0, the server does not leave trace logs. If it is set to 1 or 2, binary trace logs are recorded with the mmap method or the buffered write method, respectively. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Static, System
Range	0~2

1.3.96. EVENT_TRACE_DEST

EVENT_TRACE_DEST specifies the directory in which the event trace file is saved. The absolute path should be specified. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.97. EVENT_TRACE_FILE_BACKUP_ON_BOOT

EVENT_TRACE_FILE_BACKUP_ON_BOOT determines if old event trace files will be backed up when RDBMS boots. If it is set to 'N', event records will continue to be written to an existing event trace file. Otherwise, all old event trace files will be backed up to a new backup directory. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Static, System
Range	

1.3.98. EVENT_TRACE_FILE_SIZE

EVENT_TRACE_FILE_SIZE specifies the maximum size of the event trace file. If the size of a trace file is larger than this size, the current file is backed up and a new trace file is created. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10485760
Class	Optional, Adjustable, Static, System
Range	100K ~ 10M

1.3.99. EVENT_TRACE_MAP

EVENT_TRACE_MAP specifies the location of the configuration file which specifies on/off of the event trace. It must be specified as an absolute path. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.100. EVENT_TRACE_TOTAL_SIZE_LIMIT

EVENT_TRACE_TOTAL_SIZE_LIMIT specifies the maximum size of all trace files accumulated in the directory specified as EVENT_TRACE_DEST. If this size is exceeded when a new trace file is created, the oldest file is deleted to prevent trace files from being generated endlessly. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	((MAX_SESSION_COUNT + 50L) * (int64_t)(EVENT_TRACE_FILE_SIZE))
Class	Optional, Adjustable, Dynamic, System
Range	100K ~ UINT64_MAX

1.3.101. EXTRA_LISTENER_PORTS

Multiple ports can be specified to configure additional ports. Use a semi-colon, ';', as the delimiter, e.g., '8900;8901;'.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.102. EX_MEMORY_AUTO_MANAGEMENT

EX_MEMORY_AUTO_MANAGEMENT enables either automatic PGA memory allocation with memory tuner or manual memory allocation.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.103. EX_MEMORY_COMPENSATE_INTERVAL

The memory tuner uses the interval specified in this parameter to check the total amount of available PGA memory and the maximum amount of PGA memory available to each operation. The interval is specified in 0.1 seconds.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	30
Class	Optional, Adjustable, Dynamic, System
Range	EX_MEMORY_DRIFT_CHECK_INTERVAL -

1.3.104. EX_MEMORY_DRIFT_CHECK_INTERVAL

To cope with rapid changes in the amount of memory, RDBMS checks whether changes in the amount of PGA memory has exceeded 10% of the total amount of PGA memory at every interval specified in this parameter. The interval is specified in 0.1 seconds.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	2
Class	Optional, Adjustable, Dynamic, System
Range	1 -

1.3.105. EX_MEMORY_DRIFT_RATIO

The memory difference RATIO for DRIFT CHECK. DRIFT will be generated when the change is $EX_MEMORY_SOFT_LIMIT * EX_MEMORY_DRIFT_RATIO$. (unit of 0.001%)

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10000
Class	Optional, Adjustable, Dynamic, System

Property	Description
Range	1 ~ 100000

1.3.106. FDPOOL_HASH_SIZE

FDPOOL_HASH_SIZE specifies the hash size to be used in the fdpool.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MAX(WTHR_PROC_CNT * _WTHR_PER_PROC * 4 * (!!CLUSTER_DATABASE+1), 128)
Class	Optional, Adjustable, Static, System
Range	

1.3.107. FLASHBACK_BUFFER_RATIO

ratio of the space flashback buffer occupies within log buffer

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	30
Class	Optional, Adjustable, Static, System
Range	1 - 50

1.3.108. FLASHBACK_LOG_ARCHIVE_FORMAT

specifies the format of the flashback archive log file.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"fb-t%t-r%r-s%s.arc"

Property	Description
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.109. GATHER_SQL_EXEC_TIME

GATHER_SQL_EXEC_TIME determines whether to measure the time spent to execute SQL statements. This parameter is used to enable EXEC_TIME of _VT_OPEN_CURSOR.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.110. GATHER_SQL_PLAN_STAT

GATHER_SQL_PLAN_STAT determines whether to collect statistics on each node in the SQL statement execution plan at the time an SQL query is executed.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.111. HASH_AREA_SIZE

HASH_AREA_SIZE specifies the maximum size of memory to be used for creating a hash table. If HASH_AREA_SIZE is large, hash joins can be completed in memory in a one-pass hash join. If HASH_AREA_SIZE is not large enough for a particular hash join, a two-pass hash join will be executed.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	(MEMORY_TARGET - TOTAL_SHM_SIZE) * 0.3
Class	Optional, Adjustable, Dynamic, Session
Range	(DB_BLOCK_SIZE * DB_FILE_MULTIBLOCK_READ_COUNT) -

1.3.112. HBASE_CONNECTOR_SCAN_CACHE

HBASE_CONNECTOR_SCAN_CACHE specifies the HBase Connector scanner row size.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1000
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.113. ILOG_DEST

ILOG_DEST specifies the directory in which the internal log file is saved. The absolute path should be specified.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	

1.3.114. ILOG_FILE_BACKUP_ON_BOOT

ILOG_FILE_BACKUP_ON_BOOT determines if old internal log files will be backed up when RDBMS boots. If it is set to 'N', internal log records will continue to be written to an existing internal log file. Otherwise, all old internal log files will be backed up to a new backup directory.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Static, System
Range	

1.3.115. ILOG_FILE_SIZE

ILOG_FILE_SIZE specifies the maximum size of the internal log file. If the size of a log file is larger than this size, the current file is backed up and a new log file is created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10485760
Class	Optional, Adjustable, Static, System
Range	100K ~ 10M

1.3.116. ILOG_MAP

ILOG_MAP specifies the location of the configuration file which specifies on/off of the internal log. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.117. ILOG_TOTAL_SIZE_LIMIT

ILOG_TOTAL_SIZE_LIMIT specifies the maximum size of all internal log files accumulated in the directory specified as ILOG_DEST. If this size is exceeded when a new log file is created, the oldest file is deleted to prevent log files from being generated endlessly.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	((MAX_SESSION_COUNT + 50L) * (int64_t)(ILOG_FILE_SIZE))
Class	Optional, Adjustable, Dynamic, System
Range	100K ~ UINT64_MAX

1.3.118. INSTANCE_NUMBER

INSTANCE_NUMBER specifies the instance number.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	THREAD
Class	Optional, Persistent, Static, System
Range	0

1.3.119. INSTANCE_TYPE

INSTANCE_TYPE specifies whether an instance is a database instance or a Active Storage instance.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"TIBERO"
Class	Optional, Persistent, Static, System
Range	TIBERO AS ACTIVE_STORAGE

1.3.120. IP_VERSION

Configure an IP protocol family to be used for network communications with a client. To use IPv4, set the configuration to 4. To use IPv6, set the configuration to 6. To automatically select and use an available protocol, set the configuration to 0.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	0, 4, or 6

1.3.121. JAVA_CLASS_PATH

JAVA_CLASS_PATH specifies the default directory used to store a class file in Java stored procedure. It must be specified as an absolute path. If not specified, the class file will be stored in DB_CREATE_FILE_DEST/java.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Static, System
Range	

1.3.122. JOB_HISTORY_LOG

JOB_HISTORY_LOG determines whether to write a job history after every job start or not.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.123. JOB_TRACE_LOG

JOB_TRACE_LOG determines whether to write a tracelog after every job start or not.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.124. KEEP_STAT_PER_SQL

KEEP_STAT_PER_SQL determines whether to maintain statistical information on execution time for each SQL statement.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.125. LIBRARY_CACHE_MAX

LIBRARY_CACHE_MAX specifies the maximum size of library cache (automatically adjusted). Deprecated.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MAX(10 << 20, (TOTAL_SHM_SIZE - DB_CACHE_SIZE) * 0.3)
Class	Optional, Adjustable, Dynamic, System
Range	10M -

1.3.126. LIBRARY_DD_CACHE_MAX

LIBRARY_DD_CACHE_MAX specifies the maximum size of library cache and DD cache (automatically adjusted).

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MAX(10 << 20, (TOTAL_SHM_SIZE - DB_CACHE_SIZE) * 0.6)
Class	Optional, Adjustable, Dynamic, System
Range	10M -

1.3.127. LISTENER_IP

LISTENER_IP specifies the IP used by listener. Both IPv4 and IPv6 addresses are supported.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"-1"
Class	Optional, Persistent, Static, System
Range	

1.3.128. LISTENER_PORT

LISTENER_PORT specifies the port number to be used by listener. If two or more instances are running on a machine, the port number must be different for each instance. The same rule is in effect for SHM_KEY parameter.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	1024 - 65535

1.3.129. LOAD_METRIC_AUTO_INTERVAL

LOAD_METRIC_AUTO_INTERVAL determines whether to enable auto interval to collect the information about server load balancing.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.130. LOAD_METRIC_COLLECT_INTERVAL_MAX

LOAD_METRIC_COLLECT_INTERVAL_MAX specifies the maximum interval of time to collect server load balancing information.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Adjustable, Dynamic, System
Range	5 - 60 (s)

1.3.131. LOAD_METRIC_COLLECT_INTERVAL_MIN

LOAD_METRIC_COLLECT_INTERVAL_MIN specifies the minimum interval of time to collect server load balancing information.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1
Class	Optional, Adjustable, Dynamic, System
Range	1 - 5 (s)

1.3.132. LOAD_METRIC_HISTORY_COUNT

LOAD_METRIC_HISTORY_COUNT specifies the number of data to be gathered on server load-balancing.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Persistent, Static, System
Range	

1.3.133. LOCAL_CLUSTER_ADDR

LOCAL_CLUSTER_ADDR specifies the network address to be used for communication between instances in the TAC node.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.134. LOCAL_CLUSTER_IP_VERSION

Configure an IP protocol family to be used for cluster network communications. To use IPv4, set the configuration to 4. To use IPv6, set the configuration to 6.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MAX(IP_VERSION , 4)
Class	Optional, Adjustable, Static, System
Range	4 or 6

1.3.135. LOCAL_CLUSTER_PORT

LOCAL_CLUSTER_PORT specifies the port number to be used for communication between instances in the TAC node.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Static, System
Range	1024 - 65535

1.3.136. LOG_ARCHIVE_DEST

LOG_ARCHIVE_DEST specifies the directory where the archive logs are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.137. LOG_ARCHIVE_DEST_1

LOG_ARCHIVE_DEST_1 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.138. LOG_ARCHIVE_DEST_2

LOG_ARCHIVE_DEST_2 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.139. LOG_ARCHIVE_DEST_3

LOG_ARCHIVE_DEST_3 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.140. LOG_ARCHIVE_DEST_4

LOG_ARCHIVE_DEST_4 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.141. LOG_ARCHIVE_DEST_5

LOG_ARCHIVE_DEST_5 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.142. LOG_ARCHIVE_DEST_6

LOG_ARCHIVE_DEST_6 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.143. LOG_ARCHIVE_DEST_7

LOG_ARCHIVE_DEST_7 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.144. LOG_ARCHIVE_DEST_8

LOG_ARCHIVE_DEST_8 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.145. LOG_ARCHIVE_DEST_9

LOG_ARCHIVE_DEST_9 specifies the directory where the archive logs are duplicated.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.146. LOG_ARCHIVE_FORMAT

LOG_ARCHIVE_FORMAT specifies the format of the archive log file.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"log-t%t-r%r-s%s.arc"
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.147. LOG_ARCHIVE_OVERWRITE

LOG_ARCHIVE_OVERWRITE determines whether to overwrite the pre-existing archive log file with the current archive log file.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Persistent, Dynamic, System
Range	

1.3.148. LOG_ARCHIVE_RETRY_TIME

LOG_ARCHIVE_RETRY_TIME specifies wait time (in seconds) to retry when it is failed to make an archive log file.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	3
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.149. LOG_BUFFER

LOG_BUFFER specifies the size of the memory space where logs are stored.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10 * 1024 * 1024
Class	Optional, Adjustable, Static, System
Range	(DB_BLOCK_SIZE) * 4 - 1G

1.3.150. LOG_CHECKPOINT_INTERVAL

LOG_CHECKPOINT_INTERVAL specifies the maximum number of blocks which have to be written before a checkpoint is forced.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Dynamic, System
Range	0 - INT32_MAX

1.3.151. LOG_CHECKPOINT_TIMEOUT

LOG_CHECKPOINT_TIMEOUT specifies a time interval, in seconds, at which the checkpoint will occur.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1800
Class	Optional, Adjustable, Dynamic, System
Range	0 - INT32_MAX

1.3.152. LOG_DEFAULT_DEST

LOG_DEFAULT_DEST specifies the directory to which server log files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.153. LOG_LVL_AS

LOG_LVL_AS specifies the logging level of AS. The higher the log level, the more log records the listener stores.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	5
Class	Optional, Adjustable, Dynamic, System
Range	1 - 6

1.3.154. LOG_LVL_CM

LOG_LVL_CM specifies the logging level of TBCM. The higher the log level, the more log records CM stores.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	2
Class	Optional, Adjustable, Static, System
Range	1 - 6

1.3.155. LOG_LVL_LIS

LOG_LVL_LIS specifies the logging level of the listener. The higher the log level, the more log records the listener stores.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	6
Class	Optional, Adjustable, Dynamic, System
Range	1 - 6

1.3.156. LOG_ON_MEMORY

LOG_ON_MEMORY determines whether to write per-thread logs in cacheable memory on file when an error occurs.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.157. LOG_ON_MEMORY_SIZE

LOG_ON_MEMORY_SIZE specifies the size of the buffer which each thread will use to write logs to file when the LOG_ON_MEMORY parameter is enabled.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	102400
Class	Optional, Adjustable, Dynamic, System
Range	100K - 10M

1.3.158. LOG_REPLICATION_1_ENABLE

LOG_REPLICATION_1_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.159. LOG_REPLICATION_2_ENABLE

LOG_REPLICATION_2_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.160. LOG_REPLICATION_3_ENABLE

LOG_REPLICATION_3_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.161. LOG_REPLICATION_4_ENABLE

LOG_REPLICATION_4_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.162. LOG_REPLICATION_5_ENABLE

LOG_REPLICATION_5_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.163. LOG_REPLICATION_6_ENABLE

LOG_REPLICATION_6_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.164. LOG_REPLICATION_7_ENABLE

LOG_REPLICATION_7_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.165. LOG_REPLICATION_8_ENABLE

LOG_REPLICATION_8_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.166. LOG_REPLICATION_9_ENABLE

LOG_REPLICATION_9_ENABLE enables the Standby db active.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.167. LOG_REPLICATION_DEST_1

LOG_REPLICATION_DEST_1 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.168. LOG_REPLICATION_DEST_2

LOG_REPLICATION_DEST_2 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.169. LOG_REPLICATION_DEST_3

LOG_REPLICATION_DEST_3 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.170. LOG_REPLICATION_DEST_4

LOG_REPLICATION_DEST_4 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.171. LOG_REPLICATION_DEST_5

LOG_REPLICATION_DEST_5 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.172. LOG_REPLICATION_DEST_6

LOG_REPLICATION_DEST_6 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.173. LOG_REPLICATION_DEST_7

LOG_REPLICATION_DEST_7 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.174. LOG_REPLICATION_DEST_8

LOG_REPLICATION_DEST_8 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.175. LOG_REPLICATION_DEST_9

LOG_REPLICATION_DEST_9 enables writing the Standby db information on the primary database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	<ip>:<port> {LGWR ARCH} {SYNC ASYNC}

1.3.176. LOG_REPLICATION_MODE

LOG_REPLICATION_MODE allows user to manage the operation mode of the Primary DB.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"UNPROTECTED"
Class	Optional, Adjustable, Dynamic, System
Range	
Syntax	{UNPROTECTED PROTECTION AVAILABILITY PERFORMANCE}

1.3.177. LONGOPS_KEEP_INTERVAL

LONGOPS_KEEP_INTERVAL specifies the retention time (in minutes) for history of long-running operations.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10080
Class	Optional, Adjustable, Dynamic, System
Range	10(10 min) - 40320(4 weeks)

1.3.178. LONGOPS_THRESHOLD_SEC

LONGOPS_THRESHOLD_SEC specifies timeout (in seconds) of performing an operation. If it takes longer than this time to handle an operation, the operation is regarded as a long-running operation and registered in v\$session_longops.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Dynamic, Session
Range	0(sec) ~ 10000(sec)

1.3.179. LONG_OPERATION_KEEP_COUNT

LONG_OPERATION_KEEP_COUNT specifies the number of high-load SQL statements on which to gather statistics.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Persistent, Static, System
Range	

1.3.180. LSNR_DENIED_IP

LSNR_DENIED_IP specifies the list of IPs that cannot connect to the listener. This parameter can be set with the same method for setting LSNR_INVITED_IP. If LSNR_INVITED_IP is set, setting in LSNR_DENIED_IP will be ignored.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.181. LSNR_DENIED_IP_FILE

LSNR_DENIED_IP_FILE specifies the file containing the list of IPs that cannot connect to the listener. If the LSNR_INVITED_IP or the LSNR_INVITED_IP_FILE is set, setting in LSNR_DENIED_IP_FILE will be ignored.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.182. LSNR_INVITED_IP

LSNR_INVITED_IP specifies the list of IPs that can connect to the listener. Use a semicolon (;) to distinguish each IP. The IP format is address/number of bits as follows. (Ex) LSNR_INVITED_IP="192.168.20.0/24;192.168.10.101" 192.168.20.0/24 : Accept all IP connections starting with 192.168.20.xxx. 192.168.10.101 : If the number of bits is omitted, accept only the corresponding IP.

- Parameter Format

Property	Description
Parameter Type	String

Property	Description
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.183. LSNR_INVITED_IP_FILE

LSNR_INVITED_IP_FILE specifies the file containing the list of IPs that can connect to the listener. A single IP address is written in each line of the file. The IP format is address/number of bits like LSNR_INVITED_IP. @range :

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.184. LSNR_LISTEN_BACKLOG

LSNR_LISTEN_BACKLOG specifies the maximum length of the queue of pending connections.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	250
Class	Optional, Adjustable, Static, System
Range	

1.3.185. LSNR_LOG_DEST

LSNR_LOG_DEST specifies the directory where the listener log files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	

1.3.186. LSNR_LOG_FILE_SIZE

LSNR_LOG_FILE_SIZE specifies the maximum size of each listener log file. If a single log file grows more than the size specified in this parameter, the current log file will be closed and a new file will be created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10485760
Class	Optional, Adjustable, Static, System
Range	100K - 1G

1.3.187. LSNR_LOG_TOTAL_SIZE_LIMIT

LSNR_LOG_TOTAL_SIZE_LIMIT specifies the maximum total file size that can be stored in the directory set in LSNR_LOG_DEST. Use this parameter to prevent database log files from growing endlessly by deleting the oldest files when the file size exceeds the specified value and hence reusing the database space.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	300 * 1024 * 1024
Class	Optional, Adjustable, Dynamic, System
Range	100K - INT64_MAX

1.3.188. MAX_BG_SESSION_COUNT

Number of sessions for processing internal tasks and jobs among MAX_SESSION_COUNT that are not sessions requested by LSNR. As many as MAX_SESSION_COUNT - MAX_BG_SESSION_COUNT sessions can be started from LSNR. MAX_BG_SESSION_COUNT must be smaller than MAX_SESSION_COUNT and must be divisible by _WTHR_PER_PROC.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Static, System
Range	0 ~ INT32_MAX

1.3.189. MAX_SESSION_COUNT

Specifies the maximum number of sessions provided by a server. If necessary, the number of worker processes configuring a session and the number of worker threads per process can be manually specified using WTHR_PROC_CNT and _WTHR_PER_PROC respectively. WTHR_PROC_CNT times _WTHR_PER_PROC must be MAX_SESSION_COUNT. If a user does not manually specify WTHR_PROC_CNT and _WTHR_PER_PROC, the default values of the number of worker threads per process (_WTHR_PER_PROC) is 10, and the number of worker processes (WTHR_PROC_CNT) is MAX_SESSION_COUNT/_WTHR_PER_PROC (round up if there is a remainder).

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	20
Class	Mandatory, Adjustable, Static, System
Range	1 ~ INT32_MAX

1.3.190. MEMORY_MAX_TARGET

Specifies the potential total amount of usable memory (shared memory plus private memory) of an instance for the foreseeable future, in bytes.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MEMORY_TARGET
Class	Optional, Adjustable, Static, System
Range	1M -

1.3.191. MEMORY_MODEL

MEMORY_MODEL specifies the memory model predefined by size.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	TOTAL_SHM_SIZE <= 2147483648 ? "SMALL" : TOTAL_SHM_SIZE <= 34359738368 ? "MEDIUM" : "LARGE"
Class	Optional, Adjustable, Static, System
Range	SMALL MEDIUM LARGE

1.3.192. MEMORY_TARGET

Specifies the current total amount of usable memory (shared memory plus private memory) of an instance, in bytes. The default unit is bytes. Append 'M' for megabytes or 'G' for gigabytes after the value.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Mandatory, Adjustable, Dynamic, System
Range	1M -

1.3.193. MEM_LOG_DEST

MEM_LOG_DEST specifies the directory in which the memory log file is saved. The absolute path should be specified.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	

1.3.194. NAMED_PIPE_DIR

NAMED_PIPE_DIR specifies the directory where named pipes used between processes are created while starting and closing the system.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	

1.3.195. NLS_CALENDAR

NLS_CALENDAR specifies which calendar system Tiberio uses.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"GREGORIAN"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.196. NLS_COMP

NLS_COMP specifies the comparison behavior of SQL operations. The characters are compared according to their binary sequence or linguistic sequence defined in NLS_SORT.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"BINARY"
Class	Optional, Adjustable, Dynamic, Session
Range	BINARY LINGUISTIC

1.3.197. NLS_CURRENCY

NLS_CURRENCY specifies the local currency symbol string for the 'L' number format.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"\$"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 5 characters in length

1.3.198. NLS_DATE_FORMAT

NLS_DATE_FORMAT specifies the default date format to be used when the database is started.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"YYYY/MM/DD"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.199. NLS_DATE_LANGUAGE

NLS_DATE_LANGUAGE specifies the default NLS date language to be used when the database is started.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"KOREAN"
Class	Optional, Adjustable, Dynamic, Session
Range	KOREAN AMERICAN JAPANESE VIETNAMESE BRAZILIAN PORTUGUESE TRADITIONAL CHINESE

1.3.200. NLS_ISO_CURRENCY

NLS_ISO_CURRENCY specifies the international currency symbol.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"DEFAULT"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.201. NLS_LANGUAGE

NLS_LANGUAGE specifies the current languages for the session.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"DEFAULT"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.202. NLS_LANG_AT_BOOT

NLS_LANG_AT_BOOT specifies the default character set before the database is mounted.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	MSWIN949
Class	Optional, Adjustable, Static, System
Range	Available Character Set

1.3.203. NLS_LENGTH_SEMANTICS

NLS_LENGTH_SEMANTICS specifies the default character length semantics.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"BYTE"
Class	Optional, Adjustable, Dynamic, Session
Range	CHAR BYTE

1.3.204. NLS_NUMERIC_CHARACTERS

NLS_NUMERIC_CHARACTERS specifies the characters for the group separator and decimal character.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"., "
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 2 characters in length

1.3.205. NLS_SORT

NLS_SORT specifies the collating sequence used by ORDER BY queries.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"BINARY"
Class	Optional, Adjustable, Dynamic, Session
Range	BINARY

1.3.206. NLS_TERRITORY

NLS_TERRITORY specifies current territory for the session.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"DEFAULT"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.207. NLS_TIMESTAMP_FORMAT

NLS_TIMESTAMP_FORMAT specifies the default timestamp format to be used when the database is started.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"YYYY/MM/DD HH24:MI:SSXFF"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.208. NLS_TIMESTAMP_TZ_FORMAT

NLS_TIMESTAMP_TZ_FORMAT specifies the default timestamp time zone format to be used when the database is started.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"YYYY/MM/DD HH24:MI:SSXFF TZR"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.209. NLS_TIME_FORMAT

NLS_TIME_FORMAT specifies the default time format to be used when the database is started.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"HH24:MI:SSXFF"
Class	Optional, Adjustable, Dynamic, Session
Range	Maximum 64 characters in length

1.3.210. OMIT_PSM_SQL_LOG_ON_MEMORY

OMIT_PSM_SQL_LOG_ON_MEMORY determines whether to write per-thread SQL of PSM unit logs in cacheable memory on file when an error occurred.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.211. OPEN_CURSORS

OPEN_CURSORS specifies the maximum number of cursors that a single session can open at once.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	50
Class	Optional, Adjustable, Dynamic, System
Range	10 - 1000
Syntax	OPEN_CURSORS=50

1.3.212. OPTIMIZER_MODE

OPTIMIZER_MODE specifies the goal of the SQL query optimizer.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"ALL_ROWS"
Class	Optional, Adjustable, Dynamic, Session
Range	10 - 1000
Syntax	{ FIRST_ROWS_[1 10 100 1000] ALL_ROWS }

1.3.213. OPTIMIZER_TRACE

optimizer trace dump

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.214. OPTIMIZER_USE_INVISIBLE_INDEXES

OPTIMIZER_USE_INVISIBLE_INDEXES specifies the availability of invisible indexes

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.215. OS_AUTH_PREFIX

Prefix for OS authenticated user.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"OSA\$"
Class	Optional, Adjustable, Static, System
Range	

1.3.216. PARALLEL_DEFAULT_DOP

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.217. PARALLEL_GRANULE_SIZE

PARALLEL_GRANULE_SIZE specifies the number of segment blocks (granule size) read into memory in a single SQL query performing a full table scan.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	3
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.218. PARALLEL_THREADS_PER_CPU

PARALLEL_THREADS_PER_CPU specifies the number of parallel execution threads per CPU.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	2
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.219. PEP_PROC_CNT

PEP_PROC_CNT specifies the number of pe processes.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4
Class	Optional, Adjustable, Static, System
Range	0 - 10000

1.3.220. PRIVKEY_FILE

PRIVKEY_FILE specifies the location of the private key files. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	
Syntax	PRIVKEY_FILE=filename[:filename [...]]

1.3.221. PSM_CODE_TYPE

PSM_CODE_TYPE specifies the interpreter mode in which PSM is implemented. It is efficient to use in interpreter mode for anonymous blocks.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"INTERPRETED"
Class	Optional, Adjustable, Dynamic, Session
Range	INTERPRETED

1.3.222. PSM_DEBUG

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.223. PSM_ERROR_CONV

Option to automatically convert the err_no in pragma exception_init(exception, err_no).

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.224. PSM_SHLIB_DIR

When a PSM subprogram or anonymous block is implemented in compile mode, PSM_SHLIB_DIR creates a shared library by converting PSM code into C code. The shared library location is stored as an absolute path. If not specified, the shared library will be stored in the DB_CREATE_FILE_DEST/psm directory.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.225. PSM_SQL_RESULT_CACHE

PSM_SQL_RESULT_CACHE determines whether to enable the PSM's feature for caching the SQL results.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.226. QUERY_REWRITE_ENABLED

QUERY_REWRITE_ENABLED enables or disables query rewrite which is globally applied for the database.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"TRUE"
Class	Optional, Adjustable, Dynamic, Session
Range	FALSE TRUE FORCE

1.3.227. QUERY_REWRITE_INTEGRITY

Sets the level of query rewrite integrity.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"ENFORCED"
Class	Optional, Adjustable, Dynamic, Session
Range	STALE_TOLERATED ENFORCED

1.3.228. RECO_PROC_WTHR_CNT

RECO_PROC_WTHR_CNT specifies the number of recovery working processes.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	16
Class	Optional, Adjustable, Static, System
Range	1 - 100

1.3.229. RESULT_CACHE_MAX_RATIO

The maximum size ratio of a query that can be cached. For example, if RESULT_CACHE_MAX_SIZE is 10MB and this value is set to 5, the maximum query size that can be cached will be 500KB, which is 5% of 10MB.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	5
Class	Optional, Adjustable, Dynamic, System
Range	1 - 100

1.3.230. RESULT_CACHE_MAX_SIZE

The maximum memory size that can be used by the result cache in shared memory. If this value is set to 0, the result cache function will be disabled.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	TOTAL_SHM_SIZE / 100
Class	Optional, Adjustable, Dynamic, System
Range	0 -

1.3.231. RESULT_CACHE_MODE

RESULT_CACHE_MODE determines which query results to store in cache. If this value is set to MANUAL, the query result will be stored only when the "RESULT_CACHE" hint is used. If this value set to FORCE, all query results will be stored in cache.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"MANUAL"
Class	Optional, Adjustable, Dynamic, Session
Range	MANUAL FORCE

1.3.232. RESUMABLE_SPACE_ALLOC

RESUMABLE_SPACE_ALLOC determines whether to enable the resumable space allocation feature.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.233. RESUMABLE_SPACE_ALLOC_TIMEOUT

RESUMABLE_SPACE_ALLOC_TIMEOUT specifies a time interval in seconds at which the resumable space allocation will occur.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Dynamic, Session
Range	0 - INT32_MAX seconds

1.3.234. RMGR_BACKUP_DEST

RMGR_BACKUP_DEST specifies the directory where RMGR backup files are stored. It must be specified as an absolute path outside active storage.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.235. RMGR_TAR_PATH

tar path for RMGR

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.236. RSRC_CHECK_INTERVAL

RSRC_CHECK_INTERVAL specifies the resource manager thread check interval in seconds.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	3
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.237. RSRC_CONTROL_THRESHOLD

RSRC_CONTROL_THRESHOLD specifies the resource manager control threshold in percentage.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	90
Class	Optional, Adjustable, Dynamic, System
Range	0 ~ 100

1.3.238. RT_AWAKE_WAITER_INTERVAL

RT_AWAKE_WAITER_INTERVAL specifies the time interval (in 0.1 seconds) that the flow control resource tuner awakes waiting WTHR.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Adjustable, Dynamic, System
Range	10 - 600 (1 - 60 seconds)

1.3.239. RT_UPDATE_ALLOWABLE_INFLOW_CNT_INTERVAL

RT_UPDATE_ALLOWABLE_INFLOW_CNT_INTERVAL specifies the time interval (in 0.1 seconds) that the flow control resource tuner updates a desired control value.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	10
Class	Optional, Adjustable, Dynamic, System
Range	10 - 600 (1 - 60 seconds)

1.3.240. SANITY_CHECK_DURING_LOG_SWITCH

SANITY_CHECK_DURING_LOG_SWITCH determines whether to check lost or damaged log files during LOG SWITCH.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.241. SEGMENT_EXTEND_LAST

SEGMENT_EXTEND_LAST enables the submission of the extension request on segment of a size smaller than the one of the previous request which failed due to shortages of segment space.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.242. SEM_KEY

SEM_KEY specifies the key of the semaphore to be used by each instance. In general, if this parameter is not defined, it will be automatically assigned a value. This is the same as in the [SHM_KEY](#) parameter. However, this can cause a conflict between programs using the same semaphore set and thus this parameter should be used to give a unique semaphore key for each instance.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	

1.3.243. SEM_SET_COUNT

The number of semaphore sets which apply to the communication between processes and threads. If _SEM_APR is set to Y, the SEM_SET_COUNT value will be set to the total number of server processes or threads. If _SEM_ARR is set to N, the SEM_SET_COUNT value will be set to a user-defined value or the default value.

- Parameter Format

Property	Description
Parameter Type	Integer

Property	Description
Default Value	1
Class	Optional, Adjustable, Static, System
Range	

1.3.244. SEPARATION_OF_DUTIES

SEPARATION_OF_DUTIES creates SYSADM, SYSSEC and SYSAUD users such that the duties of SYS are separated and assigned to three users. SYSSEC manages user accounts and controls user profiles. SYSAUD can audit anything on the database. SYSADM has all privileges except for those of SYSSEC and SYSAUD. These administrator accounts are created during installation, and SYS account becomes locked and cannot be unlocked.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Persistent, Static, System
Range	

1.3.245. SERVER_LOAD_TOLERANCE

SERVER_LOAD_TOLERANCE specifies the maximum limit to be used for server load balancing.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	5
Class	Optional, Adjustable, Dynamic, System
Range	0 - (ms/#)

1.3.246. SERVER_SIDE_LOAD_BALANCE

SERVER_SIDE_LOAD_BALANCE specifies server load-balancing behavior. NONE: Server load balancing is not performed. SHORT: The load is balanced based on differences in the processing speed of servers. LONG: The load is balanced based on differences in the session count of servers.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"NONE"
Class	Optional, Adjustable, Dynamic, System
Range	NONE SHORT LONG

1.3.247. SERVICE_CONTROL_STOP_DOWNMODE

SERVICE_CONTROL_STOP_DOWNMODE specifies a server down mode used to suspend a DBMS service from Windows Service Manager.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"IMMEDIATE"
Class	Optional, Adjustable, Static, System
Range	
Syntax	{normal post_tx immediate abort switchover abnormal NORMAL POST_TX IMMEDIATE ABORT SWITCHOVER ABNORMAL}

1.3.248. SHARED_PARAMETER_FILE

SHARED_PARAMETER_FILE specifies the parameter file that can be shared.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System

Property	Description
Range	

1.3.249. SHM_KEY

SHM_KEY specifies the key of the shared memory to be used by each instance. In general, if this parameter is not defined, it will be automatically assigned a value. However, this can cause a conflict between programs using the same shared memory key and thus this parameter should be used to give a unique shared memory key for each instance.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	Depending on system environment
Class	Optional, Adjustable, Static, System
Range	

1.3.250. SHP_ALLOC_DUMP_IDX

The allocator index to dump when SHP_ALLOC_FULL_DUMP=N. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.251. SHP_ALLOC_FULL_DUMP

Determines whether to record detailed information when dumping the shared pool allocator.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.252. SLAB_BLOCK_RESERVED_COUNT

SLAB_BLOCK_RESERVED_COUNT specifies the number of blocks maintained in the slab allocator.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4
Class	Optional, Adjustable, Dynamic, System
Range	2 - 1024

1.3.253. SLOG_DEST

SLOG_DEST specifies the directory where system log files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.254. SLOG_FILE_SIZE

SLOG_FILE_SIZE specifies the maximum size of each system log file. If a single system log file grows more than the size specified in this parameter, the current system log file will be closed and a new file will be created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	104857600
Class	Optional, Adjustable, Static, System
Range	100K - 1G

1.3.255. SLOG_HISTORY

SLOG_HISTORY determines whether to gather system log history.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Static, System
Range	

1.3.256. SLOG_HISTORY_BUFSIZE

SLOG_HISTORY_BUFSIZE specifies the size of a system log history buffer.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	256
Class	Optional, Adjustable, Static, System
Range	

1.3.257. SLOG_HISTORY_QSIZE

SLOG_HISTORY_QSIZE specifies the number of system log on which histories are to be gathered.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4
Class	Optional, Adjustable, Static, System
Range	

1.3.258. SLOG_TOTAL_SIZE_LIMIT

SLOG_TOTAL_SIZE_LIMIT specifies the maximum total file size that can be stored in the directory set in SLOG_DEST. Use this parameter to prevent database log files from growing endlessly by deleting the oldest files when the file size exceeds the specified value and hence reusing the database space.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	300 * 1024 * 1024
Class	Optional, Adjustable, Dynamic, System
Range	100K -

1.3.259. SORT_AREA_SIZE

SORT_AREA_SIZE specifies the maximum size of memory that RDBMS will allow for a one-pass sorting. The data which exceeds the specified range is sorted using two-pass sorting. If this parameter is specified too large, all sort operations will be performed using a one-pass sort, which leads to a drastic decrease in the number of SQL queries that can be simultaneously handled. If it is specified too small, all operations will be performed using two-pass and thus SQL queries take longer to execute. It is recommended to run a test with SQL queries to determine the memory usage required to execute each SQL query and check its frequency and degree of importance using the trace file. After determining an appropriate value based on this information, 10% - 50% should be added to the value for the proper memory size.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	(MEMORY_TARGET - TOTAL_SHM_SIZE) * 0.3
Class	Optional, Adjustable, Dynamic, Session
Range	(DB_BLOCK_SIZE * DB_FILE_MULTIBLOCK_READ_COUNT) -

1.3.260. SPIN_PARAMETER_AUTO_ADJUST

The feature of automatically adjusting the spinlock parameter

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.261. SPIN_PARAMETER_PER_TYPE

Determines whether to separately specify the spinlock parameter by type.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.262. SQL_LOG_ON_MEMORY

SQL_LOG_ON_MEMORY determines whether to write per-thread SQL logs in cacheable memory on file when an error occurs.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.263. SQL_LOG_ON_MEMORY_SIZE

SQL_LOG_ON_MEMORY_SIZE specifies the size of the buffer which each thread will use to write logs to file when the SQL_LOG_ON_MEMORY parameter is enabled.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	102400
Class	Optional, Adjustable, Dynamic, System
Range	100K - 10M

1.3.264. SQL_STAT_HISTORY

SQL_STAT_HISTORY determines whether to gather statistics on SQL statements.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.265. SQL_STAT_HISTORY_QSIZE

SQL_STAT_HISTORY_QSIZE specifies the number of SQL statements per thread on which statistics are to be gathered.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	50
Class	Optional, Adjustable, Static, System
Range	

1.3.266. SQL_STAT_HISTORY_THRESHOLD

SQL_STAT_HISTORY_THRESHOLD specifies the data gathering threshold for SQL statements. With SQL_STAT_HISTORY enabled, SQL statements are gathered if the specified execution period (ms) is exceeded.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	50
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.267. SQL_TRACE

SQL_TRACE determines whether to record SQL trace information or not. The SQL trace enables profiling of SQL execution information. However, since using this function affects server performance, it is recommended not to use this function in a real server operating environment.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.268. SQL_TRACE_DEST

SQL_TRACE_DEST specifies the directory where the SQL trace file will be stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Dynamic, System

Property	Description
Range	

1.3.269. SQL_TRANSLATION_PROFILE

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.270. STANDBY_FILE_NAME_CONVERT

STANDBY_FILE_NAME_CONVERT specifies the prefix conversion rule used for converting the Primary DB path to the Standby DB path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''
Class	Optional, Adjustable, Static, System
Range	
Syntax	{<primary path>,<standby path>}, ...

1.3.271. STANDBY_FLUSH_WAIT

Determines whether to send an ack message after flushing the redo log received by standby.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y

Property	Description
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.272. STANDBY_USE_OBSERVER

Option to enable observer in STANDBY

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.273. STAR_TRANSFORMATION_ENABLED

STAR_TRANSFORMATION_ENABLED enables or disables star transformation.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	"FALSE"
Class	Optional, Adjustable, Dynamic, Session
Range	TRUE FALSE

1.3.274. SUMMARY_FIRST_IN_GROUPBY_CUBE

Displays the summary row before the sub-total row of each group in the result set of Group By Cube().

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N

Property	Description
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.275. TABLE_GLOBAL_COMPRESSION

TABLE_GLOBAL_COMPRESSION determines whether to perform compression using a global symbol table.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.276. TCP_RCVBUF_SIZE

TCP_RCVBUF_SIZE specifies the size of the TCP receive buffer

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Static, System
Range	

1.3.277. TCP_SNDBUF_SIZE

TCP_SNDBUF_SIZE specifies the size of the TCP send buffer

- Parameter Format

Property	Description
Parameter Type	Integer

Property	Description
Default Value	0
Class	Optional, Adjustable, Static, System
Range	

1.3.278. TDE_HASH_VERIFICATION

Verify data integrity during decryption.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.279. TDE_SELF_UPDATE_MODIFICATION_DEFENCE

Defend against the self update modification attack. Update will be changed to delete and insert, and performance will be degraded. Rowid will also be changed: SELECT FOR UPDATE will not be supported.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.280. TEMP_GRANULE_SIZE

TEMP_GRANULE_SIZE specifies the number of blocks to be allocated for each node when managing the temporary tablespace of each node in the TAC environment.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1000
Class	Optional, Adjustable, Static, System
Range	

1.3.281. TEMP_TABLESPACE

TEMP_TABLESPACE specifies the temporary tablespace to be used in the database. If not specified, the first temporary tablespace is used by default.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.282. THREAD

THREAD specifies the redo thread number to be used by instances.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Persistent, Static, System
Range	0 - 1024

1.3.283. TIBERO_PERFORMANCE_REPOSITORY

TIBERO_PERFORMANCE_REPOSITORY determines whether to activate the TPR feature.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.284. TOTAL_SHM_MAX_SIZE

TOTAL_SHM_MAX_SIZE specifies the potential total size of shared memory size used by instances.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	TOTAL_SHM_SIZE
Class	Optional, Adjustable, Static, System
Range	32 bit machine: 1M - UINT32_MAX, 64 bit machine: 1 M - INT64_MAX

1.3.285. TOTAL_SHM_SIZE

TOTAL_SHM_SIZE specifies the current total size of shared memory size used by instances. The default unit is bytes. Append 'M' for megabytes or 'G' for gigabytes after the value.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Mandatory, Adjustable, Dynamic, System
Range	32 bit machine: 1M - UINT32_MAX, 64 bit machine: 1 M - INT64_MAX

1.3.286. TPR_AGGREGATION

TPR_AGGREGATION determines whether to aggregate information of snapshots removed due to retention over into one predetermined snapshot.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.287. TPR_METRIC

TPR_METRIC determines whether to collect metric statistics.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.288. TPR_SEGMENT_STATISTICS

TPR_SEGMENT_STATISTICS determines whether to collect segment statistics.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.289. TPR_SNAPSHOT_RETENTION

TPR_SNAPSHOT_RETENTION specifies the period, in days, to retain TPR snapshot data.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	7
Class	Optional, Adjustable, Dynamic, System
Range	1 ~ 1500

1.3.290. TPR_SNAPSHOT_SAMPLING_INTERVAL

TPR_SNAPSHOT_SAMPLING_INTERVAL specifies the interval, in minutes, to sample TPR snapshot data.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	60
Class	Optional, Adjustable, Dynamic, System
Range	1 ~ 50400

1.3.291. TPR_SNAPSHOT_TOP_SEGMENT_CNT

TPR_SNAPSHOT_TOP_SEGMENT_CNT specifies the count of segments to display in tpr report.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	5
Class	Optional, Adjustable, Static, System
Range	5 ~ 1000

1.3.292. TPR_SNAPSHOT_TOP_SQL_CNT

TPR_SNAPSHOT_TOP_SQL_CNT specifies the count of SQLs to display in tpr report.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	5
Class	Optional, Adjustable, Dynamic, System
Range	5 ~ 1000

1.3.293. TRACE_DUMP_DEST

TRACE_DUMP_DEST specifies the directory to which trace dump files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.294. TRACE_LOG_DEST

TRACE_LOG_DEST specifies the directory where trace log files are stored. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	Depending on system environment
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.295. TRACE_LOG_DISPLAY_YEAR

The TRACE_LOG_DISPLAY_YEAR parameter specifies whether the time field in the trace.log file created by the server displays the year. If this parameter is set to Y, the date is displayed as YYYY/MM/DD. Otherwise, it is displayed MM/DD.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Static, System
Range	

1.3.296. TRACE_LOG_FILE_SIZE

TRACE_LOG_FILE_SIZE specifies the maximum size of each trace log file. If a single trace log file grows more than the size specified in this parameter, the current trace log file will be closed and a new file will be created.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	104857600
Class	Optional, Adjustable, Static, System
Range	100K - 1G

1.3.297. TRACE_LOG_FILE_TRUNC

TRACE_LOG_FILE_TRUNC determines whether to delete the previous trace logs before recording new logs or keep the previous trace logs and record new logs following the previous logs each time the database system is rebooted.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N

Property	Description
Class	Optional, Adjustable, Static, System
Range	

1.3.298. TRACE_LOG_TOTAL_SIZE_LIMIT

TRACE_LOG_TOTAL_SIZE_LIMIT specifies the maximum total file size that can be stored in the directory set in TRACE_LOG_DEST. Use this parameter to prevent database log files from growing endlessly by deleting the oldest files when the file size exceeds the specified value and hence reusing the database space.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	300 * 1024 * 1024
Class	Optional, Adjustable, Dynamic, System
Range	100K -

1.3.299. TSAM_PREFETCH_SIZE

TSAM_PREFETCH_SIZE specifies the size of the buffer to be prefetched when db file sequential read is enabled in TSAM API.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	4096
Class	Optional, Adjustable, Dynamic, System
Range	0K - 64K

1.3.300. TSN_SYNC_UDP_PORT

The UDP port to be used between nodes for TSN synchronization.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	55901
Class	Optional, Adjustable, Static, System
Range	1024 - 65535

1.3.301. TX_FORCE_COMMIT_DUMP

TX_FORCE_COMMIT_DUMP determines whether to dump undo records forcibly committed.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.302. TX_RECOVERY_SESSION_COUNT

TX_RECOVERY_SESSION_COUNT specifies the maximum number of sessions used for transaction recovery.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.303. UNDO_RETENTION

UNDO_RETENTION specifies the minimum time period in seconds for which undo can be retained.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	900
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.304. UNDO_TABLESPACE

UNDO_TABLESPACE specifies the undo tablespace to be used by a node. If this parameter is not specified, the first available undo tablespace will be used by default. This parameter must be defined in the TAC environment.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	''''
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.305. USE_ACTIVE_STORAGE

USE_ACTIVE_STORAGE specifies whether a database instance uses the Active Storage function by connecting to the Active Storage instance.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.306. USE_ILOG

USE_ILOG determines whether to record internal log.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Static, System
Range	

1.3.307. USE_NET_KEEPAIVE

USE_NET_KEEPAIVE determines whether to activate the socket option of the 'TCP keepalive'.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.308. USE_PROFILE

Determines whether to use the PROFILE feature.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.309. USE_PROFILE_LOGIN_LOGOUT_TIME

Determines whether to record login and logout time.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.310. USE_RECYCLEBIN

USE_RECYCLEBIN determines whether to use the recyclebin function. If this feature is used, the drop table command does not actually delete a table. In order to actually delete a table, use the purge command or give the purge option in the drop table command. The flashback table feature can be used.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.311. USE_RESOURCE_MANAGER

USE_RESOURCE_MANAGER specifies whether to use the resource manager or not.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.312. USE_SSVR

USE_SSVR specifies whether the DB instance uses a storage server or not. (Deprecated)

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.313. USE_STORED_OUTLINES

Determines whether to apply created outline.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, Session
Range	

1.3.314. USE_TRUNCATE_PRIVILEGE

Determines whether to use the TRUNCATE PRIVILEGE feature.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	N
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.315. USE_TS_QUOTA

Determines whether to use the TABLESPACE QUOTA feature.

- Parameter Format

Property	Description
Parameter Type	Boolean
Default Value	Y
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.316. USGMT_AUTO_SHRINK_INTERVAL

USGMT_AUTO_SHRINK_INTERVAL specifies the interval (in minutes) of occurrence of automatic undo segment shrinkage. If this parameter is set to 0, automatic undo segment shrinkage never happens.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	0
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.317. UTL_FILE_DIR

UTL_FILE_DIR specifies the default directory used by the UTL_FILE package. If this parameter is not specified, the directory specified in PSM_SHLIB_DIR will be used by default.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Dynamic, System
Range	

1.3.318. WALLET_FILE

WALLET_FILE specifies the location of the wallet files. It must be specified as an absolute path.

- Parameter Format

Property	Description
Parameter Type	String
Default Value	""
Class	Optional, Adjustable, Static, System
Range	
Syntax	WALLET_FILE=filename[:filename [...]]

1.3.319. WTHR_PROC_CNT

WTHR_PROC_CNT specifies the number of working processes.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	MAX_SESSION_COUNT/_WTHR_PER_PROC
Class	Optional, Adjustable, Static, System
Range	1 - 10000

1.3.320. WTHR_PROC_CNT_MAX

WTHR_PROC_CNT_MAX specifies the maximum number of working processes. With RDBMS started, as many working processes as defined in WTHR_PROC_CNT are implemented. If the number of working processes becomes insufficient during the operation of RDBMS, the number of working processes will be increased within the limit specified in this parameter. If the WTHR_PROC_CNT_MAX parameter is set to the default value, the number of working processes defined in WTHR_PROC_CNT will be used as the maximum number of processes to run.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	WTHR_PROC_CNT
Class	Optional, Adjustable, Static, System
Range	1 - 10000

1.3.321. XA_MAX_BRANCH_CNT

XA_MAX_BRANCH_CNT specifies the maximum number of XA transaction branches that can run one instance at a time. Setting this value too large could result in excessive memory usage.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	1024
Class	Optional, Adjustable, Static, System
Range	256 - 8192

1.3.322. XA_TIMER_INTERVAL

XA_TIMER_INTERVAL specifies the interval for how often XA session timeouts are checked. The interval is specified in 0.1 seconds.

- Parameter Format

Property	Description
Parameter Type	Integer
Default Value	100
Class	Optional, Adjustable, Dynamic, System
Range	10 - 600 (1 - 60 seconds)

제2장 데이터 사전

본 장에서는 데이터 사전에 대한 개념과 구조를 설명하고 데이터 사전의 참조 및 갱신을 기술한다.

2.1. 개요

데이터 사전(Data Dictionary)은 데이터베이스 관리 시스템(Database Management System, 이하 DBMS)을 효율적으로 사용하기 위해 데이터베이스에 저장된 정보를 요약한 것이다. 즉 일련의 데이터를 정의하고 설명해 주는 메타데이터(metadata)를 유지하는 것을 의미한다.

데이터 사전은 데이터 정보를 분류하고 처리하기 위한 시스템과 절차로서 데이터를 이해하는 과정에서 발생하는 오류, 또는 데이터 해석상의 어려움을 제거하기 위해 사용된다.

데이터 사전은 테이블과 뷰로 정의되며, 사용자 유형별로 접근 권한이 다르다.

사용자 유형	설명
DBA	직접 접근이 가능하며, 데이터 사전을 직접 갱신할 수 있다.
일반 사용자	뷰를 통해 접근이 가능하며, 데이터 사전을 읽기만 할 수 있다.

데이터 사전에 저장되는 정보는 다음과 같다.

- 데이터베이스 스키마 객체 정보
테이블, 인덱스, 뷰 등이 있다.
- 사용자 정보
이름, 권한 등이 있다.
- 테이블과 컬럼 속성 정보
사용 가능한 디스크 용량, 컬럼 타입, 기본값 등이 있다.
- 테이블의 무결성 제약조건 정보
기본 키, 외래 키, NULL 값 허용 여부 등이 있다.
- 디스크 구조 정보
테이블 스페이스, 데이터 파일, 세그먼트, 사용자 및 테이블 등이 있다.
- 히스토그램(Histogram) 정보
주로 많이 사용되는 컬럼 값, 컬럼 값의 분포 등이 있다.

2.2. 데이터 사전의 구조

Tibero 의 데이터 사전은 크게 다음과 같이 구성된다.

- 기반 테이블(Base Table)
- 정적/동적 뷰
 - 정적 뷰(Static View)
 - 동적 뷰(Dynamic View)

데이터 사전을 위와 같이 분리하여 구성하는 이유는 데이터베이스 시스템의 일관성을 유지하고 사용자에게 편의성을 제공하며 데이터베이스의 저장 공간을 절약하기 위함이다. 만약 일반 사용자의 부주의로 기반 테이블의 내용을 직접 갱신하였다면, 데이터베이스 시스템에 심각한 에러를 발생시킬 수 있다.

2.2.1. 기반 테이블

기반 테이블은 중복된 데이터를 제거하는 정규화 과정을 거친 테이블이다. 기반 테이블 안에 일부 데이터는 플래그(Flag)로 나타나며, 암호화 되어 있다. 또한, 기반 테이블의 자체 데이터도 기반 테이블에 저장된다.

기반 테이블은 정규화를 거친 데이터가 저장되므로 중복된 데이터가 거의 존재하지 않는다. 또한, 기반 테이블은 데이터 사전을 저장하는 데 필요한 디스크 공간을 줄이며 중복된 데이터가 일관성 없이 갱신될 가능성을 사전에 예방하는 역할을 수행한다.

기반 테이블의 내용을 직접 참조할 수 있는 사용자는 오직 **DBA**만이 할 수 있다. 일반 사용자는 데이터 사전을 참조하는 기반 테이블의 내용을 참조하려면 정적/동적 뷰를 이용해야 한다. 왜냐하면, 모든 데이터 사전을 참조하는 기반 테이블의 소유자는 **SYS** 사용자이기 때문이다.

참고

SYS 사용자는 Tibero에서 자체적으로 생성한 사용자이며, **DBA**를 포함한 모든 사용자의 상위에 존재하는 사용자이다. 또한, 이 사용자는 Tibero 자체를 관리하는 역할을 수행한다. **DBA**나 기타 어떠한 권한을 가진 사용자도 이 사용자를 대신할 수 없다.

또한, 기반 테이블을 직접 갱신할 수 있는 사용자는 **DBA**뿐이며, 일반 사용자는 데이터 정의어(Data Definition Language, 이하 DDL) 문장을 통해서만 가능하다. DDL 문장을 실행하려면 반드시 대상 객체에 대한 DDL 문장의 실행 권한이 있어야 한다. 예를 들어 EMP 테이블의 외래 키 컬럼을 변경하려면 현재 사용자가 EMP 테이블에 대한 갱신 권한이 있어야 한다는 의미이다.

그리고 기반 테이블에 대한 관리를 데이터 사전이 함으로써 일반 사용자는 기반 테이블의 정의를 몰라도 간단한 DDL 문장으로 데이터 사전 작업을 수행할 수 있다.

예를 들어 일반 사용자가 기반 테이블을 생성 하려면 다음과 같은 순으로 정의해야 한다.

1. 객체 정의

기본 테이블인 **_DD_OBJ** 테이블에 스키마 객체를 등록한다.

2. 테이블 정의

기본 테이블인 **_DD_TBL** 테이블에 하나의 로우를 삽입한다.

3. 컬럼 정의

기본 테이블인 **_DD_COL** 테이블에 컬럼 개수에 따라 로우를 삽입한다. 만약 인덱스를 선언하였거나 제약조건을 정의한 경우, 기본 테이블에도 개수에 따라 로우를 삽입해야 한다.

2.2.2. 정적/동적 뷰

정적 뷰는 하나 이상의 기본 테이블과 다른 정적/동적 뷰를 기반으로 정의된 뷰이다. 따라서 정적 뷰는 기본 테이블과 정적/동적 뷰 간의 조인을 이용하여 생성된다.

동적 뷰는 Tibero 에서 동적으로 변경되는 데이터를 테이블 형태로 보여주는 뷰이다. 이처럼 동적으로 변경되는 데이터의 예를 들면, 현재 서버 프로세스의 상태, 트랜잭션의 수행 상태, 사용자 권한 등이다. 이러한 데이터는 실제로 디스크에 저장되지 않으며, 사용자가 동적 뷰를 사용할 때마다 실시간으로 테이블 형태로 생성된다.

2.3. 데이터 사전의 참조

Tibero에서 데이터 사전이 참조되는 경우는 다음과 같이 크게 세 가지로 나눌 수 있다.

- 일반 사용자에게 의한 참조
- SQL 파서(Parser), 질의 최적화기에 의한 참조
- Tibero에 의한 참조

2.3.1. 일반 사용자에게 의한 참조

일반 사용자는 정적/동적 뷰를 이용하여 데이터 사전을 참조한다. 데이터 사전을 참조하는 방법은 정적/동적 뷰를 SQL 문장에 포함하여 실행하는 것이다.

다음은 현재 사용자가 정의한 모든 테이블의 이름을 출력하는 예이다. 본 예에서는 모든 테이블에 대한 정보를 포함하는 정적 뷰가 **USER_TABLES** 이므로, 다음과 같은 SQL 문장을 실행한다.

```
SELECT TABLE_NAME FROM USER_TABLES;
```

일반 사용자는 위와 같이 정적 뷰를 이용하여 데이터 사전을 참조할 수 있다.

스키마 객체와 관련된 정적 뷰는 사용자가 접근할 수 있는 범위에 따라 크게 세 가지로 나뉘며, 다음과 같이 접두어로 구분된다.

접두어	설명
USER_	현재 사용자가 정의한 객체에 대한 뷰이다.
ALL_	현재 사용자가 접근할 수 있는 객체에 대한 뷰이다.
DBA_	모든 객체에 대한 뷰이다.

참고

정적 뷰는 위 표와 같이 접두어만 다르며, 모두 같은 컬럼으로 구성되어 있다. 단, **USER_** 뷰는 컬럼 소유자(OWNER)를 포함하지 않는다.

2.3.2. SQL 파서, 질의 최적화기에 의한 참조

SQL 파서

Tibero는 사용자로부터 입력된 SQL 문장을 해석할 때 데이터 사전을 이용한다. 이러한 과정을 의미 분석 (Semantic Analysis) 과정이라고 부른다.

의미 분석 과정은 SQL 문장에 포함된 스키마 객체가 존재하는지, 현재 사용자가 접근할 수 있는지, 특정 테이블에 포함된 컬럼은 어떤 것이 있는지, 컬럼의 타입에 따라 맞게 연산을 실행하는지 등의 검사를 수행한다.

다음의 SQL 문장으로 의미 분석 과정을 설명한다.

```
SELECT C11
  FROM T1, T2
 WHERE C11 = C21 AND C22 LIKE '20%';
```

- ① **SELECT** 문장에 포함된 스키마 객체 즉 T1, T2가 존재하는지, 그리고 이 객체에 현재 사용자가 접근할 수 있는지 검사한다.
- ② 접근에 문제가 없다면, C11, C21, C22 컬럼이 T1, T2 테이블에 각각 정의되어 있는지, 아니면 동시에 T1, T2 테이블에 정의되어 있는지(또는 모호성이 존재하는지.)를 검사한다.
- ③ C11과 C12 컬럼이 비교 연산이 가능한지, C22 컬럼이 **LIKE** 연산자를 수행할 수 있는 문자열 타입인지 검사한다.

위의 SQL 문장은 의미 분석 과정을 거친 후 각 컬럼이 포함된 테이블을 명시적으로 표시하고 다음과 같이 변환된다.

```
SELECT T1.C11
  FROM T1, T2
 WHERE T1.C11 = T2.C21 AND T2.C22 LIKE '20%';
```

질의 최적화기

Tibero는 질의 최적화기를 이용하여 SQL 문장에 대한 효율적인 실행계획(Execution Plan)을 생성하기 위해 데이터 사전에 저장된 통계 정보를 참조한다.

이러한 통계 정보는 각 스키마 객체의 기반 테이블에 저장되어 있으며, 히스토그램을 저장하는 기반 테이블에도 저장되어 있다.

예를 들어 테이블 정의를 포함하는 기반 테이블에는 테이블 안에 로우의 개수, 디스크 블록의 개수, 하나의 디스크 블록에 포함된 로우의 평균 개수 등이다. 히스토그램 테이블에는 특정 컬럼에 대하여 컬럼 값의 분포, 자주 사용되는 컬럼 값 등을 저장하고 있다.

또한, 질의 최적화기는 인덱스에 대한 정보도 참조한다. 예를 들어 테이블에 어떤 컬럼이 인덱스가 생성되어 있는지, 인덱스의 단말 노드(Terminal Node)에 저장된 레코드의 평균 개수는 몇 개인지 등을 참조한다.

다음은 질의 최적화기가 어떤 데이터 사전 정보를 이용하는지 확인할 수 있는 예이다.

```
SELECT *  
FROM T1, T2  
WHERE T1.C1 = T2.C2;
```

위 예에서 보듯이 SELECT 문장은 WHERE 절의 조건에 따라 조인 연산을 수행해야 한다. 일반적으로 조인 연산은 시스템의 메모리와 CPU 시간이 많이 요구되는 연산이다. 따라서, 될 수 있으면 적은 메모리를 사용하여 조인 연산을 실행하는 방법을 찾아야 한다.

테이블 T1과 T2에 대하여 중첩 루프 조인(Nested-Loop Join)을 수행하는 방법은 다음과 같다.

- T1을 외부 루프(Outer Loop)로 한다.
- T2를 내부 루프로 한다.

일반적으로, 포함된 로우의 개수가 적은 테이블을 외부 루프 테이블로 하는 것이 연산 비용이 적다. 따라서, 질의 최적화기는 데이터 사전의 내용을 참조하여 테이블 T1과 T2 중에서 포함된 로우의 개수가 적은 것을 외부 루프로 하여 SQL 질의를 수행하도록 한다.

질의 최적화기가 인덱스에 대한 데이터 사전의 내용을 참조한 결과 T1.C1과 T2.C2 컬럼 모두에 대하여 인덱스가 생성되었다면, 중첩 루프 조인이 아니라, 좀 더 적은 메모리 양과 CPU 작업이 필요한 정렬 병합 조인(Sort-Merge Join) 연산을 수행한다.

2.3.3. Tibero에 의한 참조

일반 사용자로부터 주어진 SQL 문장에 대한 의미 분석 및 질의 최적화 과정을 수행할 뿐만 아니라, SQL 문장을 실행할 때에도 데이터 사전의 내용을 참조한다.

의미 분석 및 질의 최적화 과정에서 검사하는 내용은 테이블에 저장된 실제 데이터와 관계없이 나타나는 결과이다. 그러나 SQL 문장을 실행할 때는 실제 데이터에 따라 추가로 수행해야 할 결과가 나타날 수 있다.

예를 들어 테이블 T1에 테이블 T2의 외래 키가 정의되어 있는 경우 테이블 T2에서 하나의 로우를 삭제하려고 할 때 Tibero는 데이터 사전을 참조하여 테이블 T2의 컬럼에 대한 외래 키가 정의되어 있는지 확인한다.

테이블 T1의 로우 중 T2 컬럼 값을 참조하는 로우가 존재한다면, 다음과 같은 추가 작업을 수행해 주어야 한다. 예를 들어 테이블 T2의 로우를 삭제하지 못하도록 한다든지 또는 테이블 T2의 로우를 참조하는 테이블 T1의 모든 로우를 함께 삭제하는 등의 작업을 추가로 한다. 실제 어떠한 작업을 수행할지는 데이터 사전의 내용을 참조해야 한다.

2.4. 데이터 사전의 갱신

데이터 사전의 갱신은 기반 테이블의 갱신을 뜻한다. 정적 뷰를 통한 갱신은 일반 사용자나 DBA도 허용되지 않으며, 동적 뷰에 대한 갱신은 자동으로 이루어지거나 다른 인터페이스를 이용해야 갱신할 수 있다. 또한, 일반 사용자는 기반 테이블에 대한 갱신을 직접 수행할 수 없다.

일반 사용자나 SYS 권한을 가진 사용자는 DDL 문장을 이용하여 안전하고 일관성 있게 데이터 사전의 내용을 갱신할 수 있다. DDL 문장을 실행하면 데이터 사전 모듈 내에서 현재 실행되고 있는 다른 트랜잭션까지 고려하여 데이터 사전의 내용을 일관성 있게 갱신해 준다.

그리고 데이터 사전의 내용과 함께 데이터베이스의 내용도 함께 갱신해야 할 경우에도 데이터 사전의 모듈 내에서 모두 수행할 수 있다.

주의

SYS 권한을 가진 사용자나 DBA만 직접 기반 테이블을 참조하고 갱신할 수 있다. 될 수 있으면 이러한 작업을 하지 않기를 권장한다.

2.4.1. DDL 문장

DDL은 데이터베이스에서 데이터와 데이터 간의 관계를 정의한 SQL 문장으로 데이터베이스 구조를 설정하는 구조화된 조회 언어이다. DDL은 데이터베이스의 스키마 객체를 생성(CREATE), 갱신(ALTER), 제거(DROP) 하거나 권한의 부여나 회수(GRANT, REVOKE), 주석(COMMENT), 자료의 버림(TRUNCATE) 등을 수행하는 문장 등을 포함한다.

각 문장은 CREATE, ALTER, DROP, TRUNCATE, GRANT, REVOKE, COMMENT 등으로 시작한다. 이 밖에도 많은 종류의 DDL이 존재한다.

Tibero에서 DDL 문장을 이용하여 CREATE, ALTER, DROP할 수 있는 객체는 다음과 같다.

- 데이터베이스
- 테이블
- 인덱스, 뷰, 동의어

- 사용자
- 무결성 제약조건
- 역할(Role)

위 객체 중 테이블은 생성, 갱신, 삭제는 `CREATE TABLE`, `ALTER TABLE`, `DROP TABLE` 문을 이용하여 수행하며, 일부 객체는 생성, 갱신, 삭제 중의 일부만 가능한 경우도 있다. 예를 들어 동의어는 `CREATE SYNONYM`, `DROP SYNONYM` 문만이 존재하고, `ALTER SYNONYM` 문은 존재하지 않는 경우이다.

그리고 아래와 같이 객체의 생성, 갱신, 삭제와 관련 없는 특별한 목적의 DDL 문장도 존재한다.

DDL 문장	설명
GRANT	사용자에게 사용 권한을 부여하는 문장이다.
REVOKE	사용자에게 사용 권한을 회수하는 문장이다.
SET ROLE	사용자의 권한을 활성화 또는 비활성화하는 문장이다.

이와 같은 DDL 문장에 의해 갱신된 데이터 사전의 내용은 기반 테이블에 저장된다. 정적 뷰를 통해 확인할 수 있으며, 일부 내용은 동적 뷰를 통해서만 확인할 수 있다.

참고

Tibero에서 지원하는 DDL 문장에 대한 내용은 "Tibero SQL 참조 안내서"를 참고한다.

제3장 Static View

3.1. Overview

The **static view** comprises of one or more base tables and static and dynamic views. Thus, the static view is generated from a join of static and dynamic views.

Tibero uses [DICTIONARY](#) to display the list of available static views. DBA or general users can retrieve data from the static view by executing a SELECT statement using the tbSQL tool.

3.2. List of Static Views

This section provides the list of static views of Tibero in alphabetical order and describes the columns which corresponds to each static view in the table.

참고

The static view of Tibero is comprised of a set of views named with a different prefix but having the same column. In this guide, the same column used for several views will be discussed only once in the list, in the first explained view.

The following is the list of summarized static views.

Static View	Description
ALL_ARGUMENTS	Displays all parameters of the procedure or function that the current user can call.
ALL_CATALOG	Displays all tables, views, synonyms, and sequences that the current user can access.
ALL_COLL_TYPES	Displays all the collection types that the current user can access.
ALL_COL_COMMENTS	Displays comments on columns of the tables or views that the current user can access.
ALL_COL_PRIVS	Displays columns for which the current user or public user is the object owner or grantor (user who granted the privilege).
ALL_COL_PRIVS_MADE	Displays columns for which the current user is the object owner or grantor.
ALL_COL_PRIVS_RECD	Displays columns for which the current user or public user is the grantee.

Static View	Description
ALL_CONSTRAINTS	Displays constraints defined in the table that the current user can access.
ALL_CONS_COLUMNS	Displays columns that the current user can access and that are specified in integrity constraint definitions.
ALL_CONS_COLUMNS_INFO	Displays columns with constraint information that the current user can access and that are specified in integrity constraint definitions.
ALL_DB_LINKS	Displays information for the database links that the current user can use.
ALL_DEPENDENCIES	Displays dependencies between procedures, functions, packages, package bodies, triggers, and views that the current user can access.
ALL_DIRECTORIES	Displays all directories that the current user can access.
ALL_ENCRYPTED_COLUMNS	Displays information of all encrypted columns that the current user can access.
ALL_ERRORS	Displays the recent errors on every accessible view, procedure, function, package, package body, trigger, library, and java object.
ALL_EXTERNAL_LOCATIONS	Displays all external table locations that the current user can access.
ALL_EXTERNAL_TABLES	Displays all external tables that the current user can access.
ALL_IDX_AND_LOB_COLUMNS_INFO	Displays index columns (including LOB) with index information of all tables that the current user can access
ALL_IDX_COLUMNS	Displays index columns of all tables that the current user can access.
ALL_IDX_COLUMNS_INFO	Displays index columns with index information of all tables that the current user can access.
ALL_IDX_EXPRESSIONS	Displays expressions on function-based index columns of all tables that the current user can access.
ALL_IDX_PARTITIONS	Displays partitions of the indexes that the current user can access.
ALL_IDX_SUBPARTITIONS	Displays subpartitions of the index that the current user can access.
ALL_INDEXES	Displays indexes of all tables that the current user can access.
ALL_IND_COLUMNS	Synonym for ALL_IDX_COLUMNS.
ALL_IND_EXPRESSIONS	Synonym for ALL_IDX_EXPRESSIONS.
ALL_IND_PARTITIONS	Synonym for ALL_IDX_PARTITIONS.
ALL_IND_SUBPARTITIONS	Synonym for ALL_IDX_SUBPARTITIONS.
ALL_JAVA_ARGUMENTS	Displays all parameters that the current user can access.
ALL_JAVA_CLASSES	Displays all classes that the current user can access.
ALL_JAVA_FIELDS	Displays all fields that the current user can access.
ALL_JAVA_METHODS	Displays all methods that the current user can access.

Static View	Description
ALL_JOBS	Displays all jobs that the current user can access.
ALL_LIBRARIES	Displays all libraries that the current user can access.
ALL_LOBS	Displays large objects (LOB) which belong to all tables that the current user can access.
ALL_LOB_PARTITIONS	Displays all LOB partitions that the current user can access.
ALL_LOB_SUBPARTITIONS	Displays LOB subpartitions that the current user can access.
ALL_LOG_GROUPS	Displays the log group definitions on the tables accessible to the current user.
ALL_LOG_GROUP_COLUMNS	Displays columns that are accessible to the current user and that are specified in log groups.
ALL_METHOD_PARAMS	Displays all the method parameters of the type that the current user can access.
ALL_METHOD_RESULTS	Displays the result of the method of this type that the current user can access.
ALL_MVIEWS	Displays all materialized views that the current user can access.
ALL_MVIEW_COMMENTS	Displays comments on the materialized views that the current user can access.
ALL_MVIEW_LOGS	Displays all materialized view logs that the current user can access.
ALL_OBJECTS	Displays all objects that the current user can access.
ALL_PACKAGE_MEMBER_TYPES	Displays types of the package that the current user can access.
ALL_PART_INDEXES	Displays partition information for the partitioned indexes that the current user can access.
ALL_PART_KEY_COLUMNS	Displays partitioning key columns of the partitioned tables or indexes that the current user can access.
ALL_PART_LOBS	Displays LOBs which belong to all partitioned tables that the current user can access.
ALL_PART_TABLES	Displays partitioning information of all partitioned tables that the current user can access.
ALL_PROCEDURES	Displays all procedures defined in all procedures and tables that the current user owns.
ALL_QUEUES	Describes all queues on which the current user has enqueue or dequeue privileges.
ALL_QUEUE_SUBSCRIBERS	Shows the list of subscribers that the current user has privilege to dequeue from.

Static View	Description
ALL_QUEUE_TABLES	Describes the queues in the queue tables accessible to the current user.
ALL_RECYCLEBIN	Displays information of all temporarily deleted objects that the current user can access.
ALL_SCHEDULER_CHAINS	Displays all scheduler chains that the current user can access.
ALL_SCHEDULER_JOBS	Displays all scheduler jobs that the current user can access.
ALL_SCHEDULER_PROGRAMS	Displays all scheduler programs that the current user can access.
ALL_SCHEDULER_RULES	Displays all scheduler rules that the current user can access.
ALL_SCHEDULER_RULE_CTX	Displays all scheduler rule ctx that the current user can access.
ALL_SCHEDULER_RUNNING_JOBS	Displays all scheduler running jobs that the current user can access.
ALL_SCHEDULER_STEPS	Displays all scheduler steps that the current user can access.
ALL_SCHEDULER_STEP_CTX	Displays all scheduler step context the current user can access.
ALL_SEGMENTS	Displays all segments that the current user can access.
ALL_SEQUENCES	Displays all sequences that the current user can access.
ALL_SOURCE	Displays source texts of the stored objects that the current user can access such as procedures, functions, package bodies, or triggers.
ALL_SUBPART_KEY_COLUMNS	Displays subpartitioning key columns of the partitioned tables or in dexes that the current user can access.
ALL_SYNONYMS	Displays all synonyms that the current user can access.
ALL_TABLES	Displays all tables that the current user can access.
ALL_TAB_COLS	Synonym for ALL_TBL_COLS.
ALL_TAB_COLUMNS	Synonym for ALL_TBL_COLUMNS.
ALL_TAB_COL_STATISTICS	Synonym for ALL_TBL_COL_STATISTICS.
ALL_TAB_COMMENTS	Displays comments on the tables that the current user can access.
ALL_TAB_HISTOGRAMS	Synonym for ALL_TBL_HISTOGRAMS.
ALL_TAB_PARTITIONS	Synonym for ALL_TBL_PARTITIONS.
ALL_TAB_PRIVS	Synonym for ALL_TBL_PRIVS.
ALL_TAB_PRIVS_MADE	Synonym for ALL_TBL_PRIVS_MADE.
ALL_TAB_PRIVS_RECD	Synonym for ALL_TBL_PRIVS_RECD.
ALL_TAB_SUBPARTITIONS	Synonym for ALL_TBL_SUBPARTITIONS.
ALL_TBL_COLS	Displays column information of all tables and views that the current user can access.

Static View	Description
ALL_TBL_COLUMNS	Displays column information of all tables and views that the current user can access.
ALL_TBL_COLUMNS_WITH_DNO	Displays column information of all tables and views, which the current user can access, with data type number of the column.
ALL_TBL_COL_STATISTICS	Displays statistics and a histogram of columns by extracting them from ALL_TBL_COLUMNS.
ALL_TBL_COMMENTS	Synonym for ALL_TAB_COMMENTS.
ALL_TBL_HISTOGRAMS	Displays histogram information of tables that the current user can access.
ALL_TBL_PARTITIONS	Displays partition information of all tables that the current user can access.
ALL_TBL_PRIVS	Displays tables for which the current user or public user is granted object privileges.
ALL_TBL_PRIVS_MADE	Displays object privileges granted on tables for which the current user or public user is the object owner or grantor.
ALL_TBL_PRIVS_RECD	Displays object privileges granted on tables for which the current user or public user is the object grantee.
ALL_TBL_SUBPARTITIONS	Displays subpartitions of all tables that the current user can access.
ALL_TRIGGERS	Displays all triggers that the current user can access.
ALL_TRIGGER_COLS	Displays column information of all triggers that the current user can access and all triggers on tables that the current user can access.
ALL_TYPES	Displays all types that the current user can access.
ALL_TYPE_ATTRS	Displays all the attributes that the current user can access.
ALL_TYPE_METHODS	Displays all the methods of this type that the current user can access.
ALL_UPDATABLE_COLUMNS	Displays all join view columns that the current user can update.
ALL_USERS	Displays all users that the current user can view.
ALL_VIEWS	Displays all views that the current user can access.
ALL_VIEWS_INTERNAL	Displays all views that the current user can access. (including views that can be accessed by the roles)
DATABASE_PROPERTIES	Displays database properties.
DBA_2PC_NEIGHBORS	Displays connection information for pending transactions.
DBA_2PC_PENDING	Displays pending transaction information.
DBA_AUDIT_TRAIL	Displays audit trails within the database.
DBA_CATALOG	Displays all tables, views, synonyms, and sequences in the database.
DBA_COLL_TYPES	Displays all the collection types.

Static View	Description
DBA_COL_COMMENTS	Displays comments on all columns in the database.
DBA_COL_PRIVS	Displays object privileges of all columns of the database.
DBA_CONSTRAINTS	Displays integrity constraints defined in the database table.
DBA_CONS_COLUMNS	Displays the columns for which the database integrity constraint is specified.
DBA_DATAFILES	Synonym for DBA_DATA_FILES.
DBA_DATA_FILES	Displays data file information.
DBA_DB_LINKS	Displays information for all database links.
DBA_DEPENDENCIES	Displays dependencies of all objects.
DBA_DIRECTORIES	Displays all directories in the database.
DBA_ENCRYPTED_COLUMNS	Displays information of all encrypted columns in the database. The columns are the same as those in ALL_ENCRYPTED_COLUMNS.
DBA_ERRORS	Displays the recent errors on every view, procedure, function, package, package body, trigger, library, and java object in the database. The columns are the same as those in ALL_ERRORS.
DBA_EXTENTS	Displays information of the extents contained in the segments of all the tablespaces in the database.
DBA_EXTERNAL_LOCATIONS	Displays all external table locations in the database.
DBA_EXTERNAL_TABLES	Displays all external tables in the database.
DBA_FREE_SPACE	Displays information of the extents that all tablespaces can use.
DBA_HIST_ACTIVE_SESS_HISTORY	Displays history information on active sessions.
DBA_HIST_FILESTAT	Displays historical statistics of data file and temp file I/O. This view includes snapshots of V\$ALL_FILESTAT.
DBA_HIST_LATCH	Displays the historical information on spinlocks. This view includes snapshots of V\$LATCH.
DBA_HIST_LIBRARYCACHE	Displays information of PP cache and DD cache. This view includes snapshots of V\$LIBRARYCACHE.
DBA_HIST_OSSTAT	Displays historical information on various OS statistics. This view includes snapshots of V\$OSSTAT2.
DBA_HIST_PGASTAT	Displays the historical statistics of PGA. This view includes the snapshot of V\$PGASTAT.
DBA_HIST_PROCESS_MEM_SUMMARY	Displays historical information on PGA memory usage. This view gets information from V\$PROCESS.

Static View	Description
DBA_HIST_SEG_STAT	Displays historical information of segment-level statistics. This view includes snapshots of V\$SEGMENT_STATISTICS.
DBA_HIST_SGASTAT	Displays the historical information on the shared pool for a database. This view includes snapshots of V\$SGASTAT.
DBA_HIST_SNAPSHOT	Displays information about TPR snapshots.
DBA_HIST_SQLSTAT	Displays historical information for SQL statistics. This view displays the priority of items of specific criteria.
DBA_HIST_SQLTEXT	Displays historical information about texts of SQL statements.
DBA_HIST_SQL_PLAN	Displays historical information about SQL execution plans. This view includes snapshots of V\$SQL_PLAN.
DBA_HIST_SQL_WORKAREA_HSTGRM	Displays historical information about work areas used by SQL cursors. This view includes snapshots of V\$SQL_WORKAREA_HISTOGRAM.
DBA_HIST_SYSMETRIC_SUMMARY	Displays a history of statistical summary of all metric values in the System Metrics Long Duration group.
DBA_HIST_SYSTEM_EVENT	Displays historical information of events performing in the system. This view includes snapshots of V\$SYSTEM_EVENT.
DBA_HIST_UNDOSTAT	Displays historical statistics of undo storage space. This view includes snapshots of V\$UNDOSTAT.
DBA_HIST_WAITSTAT	Displays the statistical history of block wait events for each block type and class. This view includes snapshots of V\$WAITSTAT.
DBA_IDX_COLUMNS	Displays index columns of all tables in the database.
DBA_IDX_EXPRESSIONS	Displays expressions on the index columns of all tables in the database.
DBA_IDX_PARTITIONS	Displays all index partitions in the database.
DBA_IDX_SUBPARTITIONS	Displays subpartitions of all indexes in the database.
DBA_INDEXES	Displays indexes of all tables in the database.
DBA_IND_COLUMNS	Synonym for DBA_IDX_COLUMNS.
DBA_IND_EXPRESSIONS	Synonym for DBA_IDX_EXPRESSIONS.
DBA_IND_PARTITIONS	Synonym for DBA_IDX_PARTITIONS.
DBA_IND_SUBPARTITIONS	Synonym for DBA_IDX_SUBPARTITIONS.
DBA_JAVA_ARGUMENTS	Displays all parameters in the database.
DBA_JAVA_CLASSES	Displays all classes in the database.
DBA_JAVA_FIELDS	Displays all fields in the database.
DBA_JAVA_METHODS	Displays all methods in the database.
DBA_JOBS	Displays all jobs in the database.

Static View	Description
DBA_LIBRARIES	Displays all libraries in the database.
DBA_LOBS	Displays LOBs which belong to all tables in the database.
DBA_LOB_PARTITIONS	Displays all LOB partitions in the database.
DBA_LOB_SUBPARTITIONS	Displays all LOB subpartitions in the database.
DBA_LOG_GROUPS	Displays the log group definitions on all tables in the database.
DBA_LOG_GROUP_COLUMNS	Displays all columns in the database that are specified in log groups.
DBA_METHOD_PARAMS	Displays the method parameters of this type.
DBA_METHOD_RESULTS	Displays the result of the method of this type.
DBA_MVIEWS	Displays all materialized views in the database. The columns are the same as those in ALL_MVIEWS.
DBA_MVIEW_COMMENTS	Displays comments on all materialized views in the database. The columns are the same as those in ALL_MVIEW_COMMENTS.
DBA_MVIEW_LOGS	Displays all materialized view logs in the database. The columns are the same as those in ALL_MVIEW_LOGS.
DBA_OBJECTS	Displays all objects in the database.
DBA_OBJ_AUDIT_OPTS	Displays objects being audited in the database.
DBA_PACKAGE_MEMBER_TYPES	Displays types of the package.
DBA_PART_INDEXES	Displays partitioning information for the partitioned indexes in the database.
DBA_PART_KEY_COLUMNS	Displays partitioning key columns for all partitioned tables or indexes in the database.
DBA_PART_LOBS	Displays LOBs which belong to the partitioned tables in the database.
DBA_PART_TABLES	Displays partitioning information of the partitioned tables in the database.
DBA_PRIV_AUDIT_OPTS	Displays users being audited in the database.
DBA_PROCEDURES	Displays all procedures in the database.
DBA_PROFILES	Describes all profiles in the database.
DBA_QUEUES	Describes all queues in the database.
DBA_QUEUE_SUBSCRIBERS	Shows the list of subscribers on all queues in the database.
DBA_QUEUE_TABLES	Describes the queues in all queue tables in the database.
DBA_RECYCLEBIN	Displays information of all temporarily deleted objects in the database. The columns are the same as those in ALL_RECYCLEBIN.

Static View	Description
DBA_REDEFINITION_OBJECTS	Displays all objects in database which are being redefined online.
DBA_ROLES	Displays all roles in the database.
DBA_ROLE_PRIVS	Displays roles granted to the users in the database.
DBA_ROLLBACK_SEGS	Synonym for DBA_UNDO_SGMTS.
DBA_RSRC_AUDIT	Displays change history of resource plan.
DBA_RSRC_CONSUMER_GROUPS	Displays all resource consumer groups in the database.
DBA_RSRC_PLANS	Displays all resource plans in the database.
DBA_RSRC_PLAN_DIRECTIVES	Displays all resource plan directives in the database.
DBA_SCHEDULER_CHAINS	Displays all scheduler chains in the database.
DBA_SCHEDULER_JOBS	Displays all scheduler jobs in the database.
DBA_SCHEDULER_PROGRAMS	Displays all scheduler programs in the database.
DBA_SCHEDULER_RULES	Displays all scheduler rules in the database.
DBA_SCHEDULER_RULE_CTX	Displays all scheduler rule ctx in the database.
DBA_SCHEDULER_RUNNING_JOBS	Displays all scheduler running jobs in the database.
DBA_SCHEDULER_STEPS	Displays all scheduler steps in the database.
DBA_SCHEDULER_STEP_CTX	Displays all scheduler step context in the database.
DBA_SEGMENTS	Displays all segments in the database.
DBA_SEQUENCES	Displays all sequences in the database.
DBA_SOURCE	Displays source texts of the stored objects in the database such as procedures, functions, package bodies, or triggers.
DBA_SUBPART_KEY_COLUMNS	Displays subpartitioning key columns of the partitioned tables or in dexes in the database.
DBA_SYNONYMS	Displays synonyms in the database.
DBA_SYS_PRIVS	Displays system privileges granted to users and roles in the database.
DBA_TABLES	Displays all tables in the database.
DBA_TABLESPACES	Displays all tablespaces in the database.
DBA_TAB_COLS	Synonym for DBA_TBL_COLS.
DBA_TAB_COLUMNS	Synonym for DBA_TBL_COLUMNS.
DBA_TAB_COL_STATISTICS	Synonym for DBA_TBL_COL_STATISTICS.
DBA_TAB_COMMENTS	Displays comments on all tables and views in the database.

Static View	Description
DBA_TAB_HISTOGRAMS	Synonym for DBA_TBL_HISTOGRAMS.
DBA_TAB_PARTITIONS	Synonym for DBA_TBL_PARTITIONS.
DBA_TAB_PRIVS	Synonym for DBA_TBL_PRIVS.
DBA_TAB_SUBPARTITIONS	Synonym for DBA_TBL_SUBPARTITIONS.
DBA_TBL_COLS	Displays columns of all tables and views in the database.
DBA_TBL_COLUMNS	Displays columns of all tables and views in the database.
DBA_TBL_COL_STATISTICS	Displays statistics and a histogram of columns by extracting them from DBA_TBL_COLUMNS.
DBA_TBL_COMMENTS	Synonym for DBA_TAB_COMMENTS.
DBA_TBL_HISTOGRAMS	Displays histogram information on tables and views in the database.
DBA_TBL_PARTITIONS	Displays partition information of all tables in the database.
DBA_TBL_PRIVS	Displays object privileges granted on all tables in the database.
DBA_TBL_SUBPARTITIONS	Displays subpartitions of all tables in the database.
DBA_TEMPFILES	Synonym for DBA_TEMP_FILES.
DBA_TEMP_FILES	Displays information of the temporary data files.
DBA_TRIGGERS	Displays all triggers in the database.
DBA_TRIGGER_COLS	Displays column information of all triggers in the database. The columns are the same as those in ALL_TRIGGER_COLS.
DBA_TS_QUOTAS	Describe tablespace quotas for all user
DBA_TYPES	Displays all types.
DBA_TYPE_ATTRS	Displays all the attributes of this type.
DBA_TYPE_METHODS	Displays all the methods of this type.
DBA_UNDO_EXTENTS	Displays information about the extents in all undo segments.
DBA_UNDO_SGMTS	Displays undo segments in the database.
DBA_UPDATABLE_COLUMNS	Displays all join view columns that the DBA can update.
DBA_USERS	Displays all users in the database.
DBA_VIEWS	Displays all views in the database.
DICTIONARY	Displays comments on tables and views in the data dictionary.
NLS_SESSION_PARAMETERS	Displays NLS parameters of the current user session.
PUBLICSYN	Displays all public synonyms in the database.
ROLE_ROLE_PRIVS	Displays the roles granted to other roles which the current user can access.

Static View	Description
ROLE_SYS_PRIVS	Displays system privileges granted to roles which the current user can access.
ROLE_TAB_PRIVS	Displays object privileges granted to roles which the current user can access.
SESSION_CONTEXT	Displays context attributes in the current session.
SESSION_PRIVS	Displays the system privileges granted to current session user.
SESSION_ROLES	Displays roles granted to the current session user.
SYS_OBJECTS	Displays IDs and types of all schema objects, and IDs of the segment header blocks in the database.
USER_ARGUMENTS	Displays all parameters of the procedure or function that the current user owns.
USER_AUDIT_TRAIL	Displays audit trails associated with the current user.
USER_CATALOG	Displays all tables, views, synonyms, and sequences that the current user owns.
USER_COLL_TYPES	Displays all the collection types that the current user owns.
USER_COL_COMMENTS	Displays comments on all columns in the tables or views that the current user owns.
USER_COL_PRIVS	Displays object privileges of the columns for which the current user is the object owner, grantor, or grantee.
USER_COL_PRIVS_MADE	Displays columns for which the current user is the grantor.
USER_COL_PRIVS_RECD	Displays columns for which the current user is the grantee.
USER_CONSTRAINTS	Displays constraints defined in the table that the current user owns.
USER_CONS_COLUMNS	Displays columns that are owned by the current user and that are specified in integrity constraint definitions.
USER_DB_LINKS	Displays information for the database links that the current user owns.
USER_DEPENDENCIES	Displays dependencies between procedures, functions, packages, package bodies, triggers, and views that the current user owns.
USER_ENCRYPTED_COLUMNS	Displays information of all encrypted columns that the current user owns. The columns are the same as those in ALL_ENCRYPTED_COLUMNS(except for OWNER)
USER_ERRORS	Displays the recent errors in every view, procedure, function, package, package body, trigger, library, and java object owned by current user. The columns are the same as those in ALL_ERRORS.(except for OWNER)

Static View	Description
USER_EXTENTS	Displays information of the extents contained in the segments that the current user owns.
USER_EXTERNAL_LOCATIONS	Displays all external table locations that the current user owns.
USER_EXTERNAL_TABLES	Displays all external tables that the current user owns.
USER_FREE_SPACE	Displays information of the extents available for the tablespaces that the current user can access.
USER_IDX_COLUMNS	Displays index columns of all tables that the current user owns.
USER_IDX_EXPRESSIONS	Displays expressions on function-based index columns of all tables that the current user owns.
USER_IDX_PARTITIONS	Displays partitions of the indexes that the current user owns.
USER_INDEXES	Displays indexes of all tables that the current user owns.
USER_IND_COLUMNS	Synonym for USER_IDX_COLUMNS .
USER_IND_EXPRESSIONS	Synonym for USER_IDX_EXPRESSIONS .
USER_IND_PARTITIONS	Synonym for USER_IDX_PARTITIONS .
USER_JAVA_ARGUMENTS	Displays all parameters that the current user owns.
USER_JAVA_CLASSES	Displays all classes that the current user owns.
USER_JAVA_FIELDS	Displays all fields that the current user owns.
USER_JAVA_METHODS	Displays all methods that the current user owns.
USER_JOBS	Displays all jobs that the current user owns.
USER_LIBRARIES	Displays all libraries that the current user owns.
USER_LOBS	Displays large objects (LOB) which belong to all tables that the current user owns.
USER_LOB_PARTITIONS	Displays all LOB partitions which belong to all tables that the current user owns.
USER_LOB_SUBPARTITIONS	Displays all LOB subpartitions which belong to all tables that the current user owns.
USER_LOG_GROUPS	Displays the log group definitions on the tables owned by the current user.
USER_LOG_GROUP_COLUMNS	Displays columns that are owned by the current user and that are specified in log groups.
USER_METHOD_PARAMS	Displays the method parameters of the type that the current user owns.
USER_METHOD_RESULTS	Displays the result of the method of this type that the current user owns.

Static View	Description
USER_MVIEWS	Displays all materialized views that the current user owns. The columns are the same as those in ALL_MVIEWS.
USER_MVIEW_COMMENTS	Displays comments on all materialized views that the current user owns.
USER_MVIEW_LOGS	Displays all materialized view logs that the current user owns. The columns are the same as those in ALL_MVIEW_LOGS.
USER_OBJECTS	Displays all objects that the current user owns.
USER_OBJ_AUDIT_OPTS	Displays the current user's own objects which are being audited.
USER_PACKAGE_MEMBER_TYPES	Displays types of the package that the current user owns.
USER_PART_INDEXES	Displays partitioning information for the partitioned indexes that the current user owns.
USER_PART_KEY_COLUMNS	Displays partitioning key columns for all partitioned tables or indexes that the current user owns.
USER_PART_LOBS	Displays LOBs which belong to the partitioned tables that the current user owns.
USER_PART_TABLES	Displays partitioning information of the partitioned tables that the current user owns.
USER_PROCEDURES	Displays all procedures that the current user owns.
USER_QUEUES	Describes the operational characteristics of every queue owned by the current user.
USER_QUEUE_SUBSCRIBERS	Shows the list of subscribers on queues that are under the current user's schema.
USER_QUEUE_TABLES	Describes the queues in the queue tables created in the current user's schema.
USER_RECYCLEBIN	Displays information of all temporarily deleted objects that the current user owns. The columns are the same as those in ALL_RECYCLEBIN.
USER_ROLE_PRIVS	Displays roles granted to the current user.
USER_SCHEDULER_CHAINS	Displays all scheduler chains that the current user owns.
USER_SCHEDULER_JOBS	Displays all scheduler jobs that the current user owns.
USER_SCHEDULER_PROGRAMS	Displays all scheduler programs that the current user owns.
USER_SCHEDULER_RULES	Displays all scheduler rules that the current user owns.
USER_SCHEDULER_RULE_CTX	Displays all scheduler rule ctx that the current user owns.

Static View	Description
USER_SCHEDULER_RUNNING_JOBS	Displays all scheduler running jobs that the current user owns.
USER_SCHEDULER_STEPS	Displays all scheduler steps that the current user owns.
USER_SCHEDULER_STEP_CTX	Displays all scheduler step context the current user owns.
USER_SEGMENTS	Displays all segments which belong to the current user.
USER_SEQUENCES	Displays all sequences that the current user owns.
USER_SOURCE	Displays source texts of the stored objects in the database such as procedures, functions, package bodies, or triggers.
USER_SUBPART_KEY_COLUMNS	Displays subpartitioning key columns of the partitioned tables or indexes that the current user owns.
USER_SYNONYMS	Displays synonyms that the current user owns.
USER_SYS_PRIVS	Displays system privileges granted to the current user.
USER_TABLES	Displays all tables that the current user owns.
USER_TABLESPACES	Synonym for DBA_TABLESPACES.
USER_TAB_COLS	Synonym for USER_TBL_COLS.
USER_TAB_COLUMNS	Synonym for USER_TBL_COLUMNS.
USER_TAB_COL_STATISTICS	Synonym for USER_TBL_COL_STATISTICS.
USER_TAB_COMMENTS	Displays comments on all tables and views that the current user owns.
USER_TAB_HISTOGRAMS	Synonym for USER_TBL_HISTOGRAMS.
USER_TAB_PARTITIONS	Synonym for USER_TBL_PARTITIONS.
USER_TAB_PRIVS	Synonym for USER_TBL_PRIVS.
USER_TAB_PRIVS_MADE	Synonym for USER_TBL_PRIVS_MADE.
USER_TAB_PRIVS_RECD	Synonym for USER_TBL_PRIVS_RECD.
USER_TBL_COLS	Displays columns of all tables and views that the current user owns.
USER_TBL_COLUMNS	Displays columns of all tables and views that the current user owns.
USER_TBL_COL_STATISTICS	Displays statistics and a histogram of columns by extracting them from USER_TBL_COLUMNS.
USER_TBL_COMMENTS	Synonym for USER_TAB_COMMENTS.
USER_TBL_HISTOGRAMS	Displays histogram information of tables that the current user owns.
USER_TBL_PARTITIONS	Displays partition information of all tables that the current user owns.
USER_TBL_PRIVS	Displays object privileges granted on all tables for which the current user is the object owner, grantor, or grantee.

Static View	Description
USER_TBL_PRIVS_MADE	Displays object privileges granted on tables for which the current user is the object owner.
USER_TBL_PRIVS_RECD	Displays object privileges granted on tables for which the current user is the object grantee.
USER_TRIGGERS	Displays all triggers that the current user owns.
USER_TRIGGER_COLS	Displays column information of all triggers that the current user owns and all triggers on tables that the current user owns. The columns are the same as those in ALL_TRIGGER_COLS.
USER_TYPES	Displays all types that the current user owns.
USER_TYPE_ATTRS	Displays all the attributes of this type that the current user owns.
USER_TYPE_METHODS	Displays all the methods of this type that the current user owns.
USER_UPDATABLE_COLUMNS	Displays all join view columns that the current user can update.
USER_USERS	Displays a description on the current user.
USER_VIEWS	Displays all views that the current user owns.

3.2.1. ALL_ARGUMENTS

Displays all parameters of the procedure or function that the current user can call.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the procedure or function
OBJECT_NAME	VARCHAR(128)	Name of the procedure or function
PACKAGE_NAME	VARCHAR(128)	Name of the package
OBJECT_ID	NUMBER	ID of the package which contains the procedure or function
ARGUMENT_NAME	VARCHAR(128)	Name of the parameter
OVERLOAD	NUMBER	Identifier of the overloaded function
POSITION	NUMBER	Position of the parameter (NULL for function return values)
DATA_TYPE	VARCHAR(65532)	Data type of the parameter

Column Name	Data Type	Description
DATA_TYPE_NO	NUMBER	Data type number of the parameter
IN_OUT	VARCHAR(9)	Direction of the parameter - IN - OUT - IN/OUT
DATA_LENGTH	NUMBER	Length of the column
DATA_PRECISION	NUMBER	Precision of the column
DATA_SCALE	NUMBER	Scale of the column
NULLABLE	VARCHAR(3)	Whether NULL values are allowed or not
TYPE_OWNER	VARCHAR(128)	Owner of the parameter type
TYPE_NAME	VARCHAR(128)	Name of the parameter type (Package name for the package local type)
TYPE_SUBNAME	VARCHAR(128)	Name of the type defined in the package (Only for the package local type)

- See also

[USER_ARGUMENTS](#)

3.2.2. ALL_CATALOG

Displays all tables, views, synonyms, and sequences that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
OBJECT_NAME	VARCHAR(128)	Name of the object
TABLE_NAME	VARCHAR(128)	Name of the object
OBJECT_TYPE	VARCHAR(23)	Type of the object

Column Name	Data Type	Description
		- TABLE - VIEW - SYNONYM - SEQUENCE

- See also

[DBA_CATALOG](#)

[USER_CATALOG](#)

3.2.3. ALL_COLL_TYPES

Displays all the collection types that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of this type
TYPE_NAME	VARCHAR(128)	Name of this type
COLL_TYPE	VARCHAR(13)	Type of this collection type
UPPER_BOUND	NUMBER	Maximum array size (Only applicable to VARYING ARRAY)
ELEM_TYPE_MOD	VARCHAR(7)	Modifier of this element type (not supported)
ELEM_TYPE_OWNER	VARCHAR(128)	Owner of this element type
ELEM_TYPE_NAME	VARCHAR(65532)	Name of this element type
LENGTH	NUMBER	Length of this element type (not supported)
PRECISION	NUMBER	Precision of this element type
SCALE	NUMBER	Scale of this element type
CHARACTER_SET_NAME	VARCHAR(128)	Name of the Character set (not supported)

Column Name	Data Type	Description
ELEM_STORAGE	NUMBER	(not supported)
NULLS_STORED	VARCHAR(3)	(not supported)

- See also

[DBA_COLL_TYPES](#)

[USER_COLL_TYPES](#)

3.2.4. ALL_COL_COMMENTS

Displays comments on columns of the tables or views that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
COLUMN_NAME	VARCHAR(128)	Name of the column
COMMENTS	VARCHAR(4000)	Comment of the column

- See also

[DBA_COL_COMMENTS](#)

[USER_COL_COMMENTS](#)

3.2.5. ALL_COL_PRIVS

Displays columns for which the current user or public user is the object owner or grantor (user who granted the privilege).

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
COLUMN_NAME	VARCHAR(128)	Name of the column
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the column
GRANTABLE	VARCHAR(3)	Whether privilege was granted with ADMIN OPTION or not - YES - NO

- See also

[DBA_COL_PRIVS](#)

[USER_COL_PRIVS](#)

3.2.6. ALL_COL_PRIVS_MADE

Displays columns for which the current user is the object owner or grantor.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
COLUMN_NAME	VARCHAR(128)	Name of the column
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the column
GRANTABLE	VARCHAR(3)	Whether privilege was granted with ADMIN OPTION or not

Column Name	Data Type	Description
		- YES - NO

- See also

[USER_COL_PRIVS_MADE](#)

3.2.7. ALL_COL_PRIVS_RECD

Displays columns for which the current user or public user is the grantee.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
COLUMN_NAME	VARCHAR(128)	Name of the column
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the column
GRANTABLE	VARCHAR(3)	Whether privilege was granted with ADMIN OPTION or not - YES - NO

- See also

[USER_COL_PRIVS_RECD](#)

3.2.8. ALL_CONSTRAINTS

Displays constraints defined in the table that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the constraint
CONSTRAINT_NAME	VARCHAR(128)	Name of the constraint
CON_TYPE	VARCHAR(22)	Type of the constraint - CHECK: Check constraint - PRIMARY KEY: Primary key constraint - UNIQUE: Unique key constraint - REFERENTIAL: Referential constraint - CHECK VIEW: Check view constraint - READ ONLY, VIEW: Read only constraint - NOT NULL: Not null constraint - ERR: Error constraint
CONSTRAINT_TYPE	VARCHAR(1)	Type of the constraint - C: CHECK, NOT NULL constraint - P: PRIMARY KEY constraint - U: UNIQUE constraint - R: REFERENTIAL constraint - O: READ ONLY VIEW constraint - V: VIEW WITH CHECK OPTION constraint
TABLE_NAME	VARCHAR(128)	Name of the table or view for which constraints are defined
SEARCH_CONDITION	VARCHAR(65532)	Search condition for CHECK constraint
R_OWNER	VARCHAR(128)	Owner of the table that is referred to by referential constraint
R_CONSTRAINT_NAME	VARCHAR(128)	Name of the primary key or unique key constraint defined in the table to be referred
DELETE_RULE	VARCHAR(9)	Delete rule for the referential constraint

Column Name	Data Type	Description
		- CASCADE - SET NULL - NO ACTION
VALIDATED	VARCHAR(13)	All data obeys the constraint or not
GENERATED	VARCHAR(14)	Whether the name of the constraint indicates the user or the generated system
STATUS	VARCHAR(8)	Current status - ENABLED - DISABLED
DEFERRABLE	VARCHAR(14)	Indicates whether the constraint is deferrable or not
DEFERRED	VARCHAR(9)	Indicates whether the constraint is initially deferred or not
INDEX_OWNER	VARCHAR(128)	Owner of the index used by the constraint
INDEX_NAME	VARCHAR(128)	Name of the index used by the constraint

- See also

[DBA_CONSTRAINTS](#)

[USER_CONSTRAINTS](#)

3.2.9. ALL_CONS_COLUMNS

Displays columns that the current user can access and that are specified in integrity constraint definitions.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the constraint
CONSTRAINT_NAME	VARCHAR(128)	Name of the constraint
TABLE_NAME	VARCHAR(128)	Name of the table for which the constraint is defined

Column Name	Data Type	Description
COLUMN_NAME	VARCHAR(128)	Name of the column defined in constraint definition
POSITION	NUMBER	Position of the column

- See also

[DBA_CONS_COLUMNS](#)

[USER_CONS_COLUMNS](#)

3.2.10. ALL_CONS_COLUMNS_INFO

Displays columns with constraint information that the current user can access and that are specified in integrity constraint definitions.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the constraint
CON_ID	VARCHAR(128)	Constraint id
CONSTRAINT_NAME	VARCHAR(128)	Name of the constraint
TABLE_NAME	VARCHAR(128)	Name of the table for which the constraint is defined
COLUMN_NAME	VARCHAR(128)	Name of the column defined in constraint definition
POSITION	NUMBER	Position of the column
CON_TYPE	VARCHAR(22)	Type of the constraint - CHECK: Check constraint - PRIMARY KEY: Primary key constraint - UNIQUE: Unique key constraint - REFERENTIAL: Referential constraint - CHECK VIEW: Check view constraint - READ ONLY, VIEW: Read only constraint - NOT NULL: Not null constraint

Column Name	Data Type	Description
		- ERR: Error constraint
DELETE_RULE	VARCHAR(9)	Delete rule for the referential constraint - CASCADE - SET NULL - NO ACTION
REF_CON_ID	NUMBER	Constraint id of the primary key or unique key constraint defined in the table to be referred to

3.2.11. ALL_DB_LINKS

Displays information for the database links that the current user can use.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the database link
DB_LINK	VARCHAR(128)	Name of the database link
USERNAME	VARCHAR(128)	User ID of the database link
HOST	VARCHAR(128)	Name of the remote database
CREATED	DATE	Database creation time

- See also

[DBA_DB_LINKS](#)

[USER_DB_LINKS](#)

3.2.12. ALL_DEPENDENCIES

Displays dependencies between procedures, functions, packages, package bodies, triggers, and views that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
NAME	VARCHAR(128)	Name of the object
TYPE	VARCHAR(12)	Type of the object - INDEX - TABLE - VIEW - SYNONYM - SEQUENCE - PROCEDURE - FUNCTION - PACKAGE - NON-EXISTENT - PACKAGE BODY - TRIGGER - UNDEFINED - DIRECTORY - LIBRARY - MATERIALIZED VIEW - JAVA - TYPE - TYPE BODY - OPERATOR - INDEXTYPE
PARENT_OBJ_OWNER	VARCHAR(128)	Owner of the parent object
PARENT_OBJ_NAME	VARCHAR(128)	Name of the parent object
PARENT_OBJ_TYPE	VARCHAR(12)	Type of the parent object

- See also

[DBA_DEPENDENCIES](#)

[USER_DEPENDENCIES](#)

3.2.13. ALL_DIRECTORIES

Displays all directories that the current user can access.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(128)	Name of the directory
PATH	VARCHAR(4000)	Path to the directory

- See also

[DBA_DIRECTORIES](#)

3.2.14. ALL_ENCRYPTED_COLUMNS

Displays information of all encrypted columns that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
ENCRYPTION_ALG	VARCHAR(29)	Encryption algorithm used for the encrypted column
SALT	VARCHAR(3)	Whether the SALT option was used for the encrypted column - Y: Salt option used - N: Salt option not used

- See also

[DBA_ENCRYPTED_COLUMNS](#)

[USER_ENCRYPTED_COLUMNS](#)

3.2.15. ALL_ERRORS

Displays the recent errors on every accessible view, procedure, function, package, package body, trigger, library, and java object.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
NAME	VARCHAR(128)	Name of the object
TYPE	VARCHAR(12)	Type of the object ('VIEW', 'PROCEDURE', 'FUNCTION', 'PACKAGE', 'PACKAGE BODY', 'TRIGGER', 'LIBRARY', 'JAVA', 'UNDEFINED')
SEQUENCE	NUMBER	Serial number of the error
LINE	NUMBER	Line number of the error
POSITION	NUMBER	Position in the line of the error
TEXT	VARCHAR(4000)	Error description
ATTRIBUTE	VARCHAR(9)	Type of the error ('ERROR', 'WARNING', 'UNDEFINED')
MESSAGE_NUMBER	NUMBER	Error number

- See also

[DBA_ERRORS](#)

[USER_ERRORS](#)

3.2.16. ALL_EXTERNAL_LOCATIONS

Displays all external table locations that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the external table location
TABLE_NAME	VARCHAR(128)	Name of the external table location
DIRECTORY_NAME	VARCHAR(30)	Name of the directory of the external table location
LOCATION	VARCHAR(4000)	External table location

- See also

[DBA_EXTERNAL_LOCATIONS](#)

[USER_EXTERNAL_LOCATIONS](#)

3.2.17. ALL_EXTERNAL_TABLES

Displays all external tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the external table
TABLE_NAME	VARCHAR(128)	Name of the external table
DEFAULT_DIRECTORY_NAME	VARCHAR(30)	Name of the default directory of the external table
ACCESS_PARAMETERS	LONG	Access parameter of the external table

- See also

[DBA_EXTERNAL_TABLES](#)

[USER_EXTERNAL_TABLES](#)

3.2.18. ALL_IDX_AND_LOB_COLUMNS_INFO

Displays index columns (including LOB) with index information of all tables that the current user can access

- Columns

Column Name	Data Type	Description
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
INDEX_TYPE	VARCHAR	Index type (string)
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column

3.2.19. ALL_IDX_COLUMNS

Displays index columns of all tables that the current user can access.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_LENGTH	NUMBER	Length of the column within the index
DESCEND	VARCHAR(4)	Sorting order in columns - DESC - ASC

- See also

[ALL_IND_COLUMNS](#)

[DBA_IDX_COLUMNS](#)

[DBA_IND_COLUMNS](#)

[USER_IDX_COLUMNS](#)

[USER_IND_COLUMNS](#)

3.2.20. ALL_IDX_COLUMNS_INFO

Displays index columns with index information of all tables that the current user can access.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
UNIQUENESS	VARCHAR(9)	Whether or not the unique key is indexed. - NONUNIQUE - UNIQUE - UNDEFINED
DISTINCT_KEYS	NUMBER	The number of distinct keys in the index
LEAF_BLOCKS	NUMBER	The number of leaf blocks in the index
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_LENGTH	NUMBER	Length of the column within the index
DESCEND	VARCHAR(4)	Sorting order in columns - DESC

Column Name	Data Type	Description
		- ASC

3.2.21. ALL_IDX_EXPRESSIONS

Displays expressions on function-based index columns of all tables that the current user can access.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_EXPRESSION	LONG	Expression of the column within the index

- See also

[ALL_IND_EXPRESSIONS](#)

[DBA_IDX_EXPRESSIONS](#)

[DBA_IND_EXPRESSIONS](#)

[USER_IDX_EXPRESSIONS](#)

[USER_IND_EXPRESSIONS](#)

3.2.22. ALL_IDX_PARTITIONS

Displays partitions of the indexes that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user

Column Name	Data Type	Description
INDEX_NAME	VARCHAR(128)	Name of the index
COMPOSITE	VARCHAR(3)	Whether or not partition belongs to a composite-partitioned index - YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the partition
SUBPARTITION_COUNT	NUMBER	The number of the subpartitions that belong to the partition
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the index
BLEVEL	NUMBER	Level of B-tree index (The level is 0 for a B-tree with only a root node)
LEAF_BLOCKS	NUMBER	The number of leaf blocks in the index
DISTINCT_KEYS	NUMBER	The number of distinct keys in the index
CLUSTERING_FACTOR	NUMBER	The clustering factor of the index
STATUS	VARCHAR(8)	Current status of the index - USABLE - UNUSABLE
NUM_ROWS	NUMBER	The number of rows in the index
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool

Column Name	Data Type	Description
		- DEFAULT - KEEP - RECYCLE
MAX_TRANS	NUMBER	Value of the MAX_TRANS parameter
INITIAL_EXTENT	NUMBER	Value of the INITIAL_EXTENT parameter
MIN_EXTENT	NUMBER	Value of the MIN_EXTENT parameter
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
LAST_ANALYZED	DATE	Date of the most recent analysis for the index partition

- See also

[ALL_IND_PARTITIONS](#)

[DBA_IDX_PARTITIONS](#)

[DBA_IND_PARTITIONS](#)

[USER_IDX_PARTITIONS](#)

[USER_IND_PARTITIONS](#)

3.2.23. ALL_IDX_SUBPARTITIONS

Displays subpartitions of the index that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
INDEX_NAME	VARCHAR(128)	Name of the index
PARTITION_NAME	VARCHAR(128)	Name of the index partition

Column Name	Data Type	Description
SUBPARTITION_NAME	VARCHAR(128)	Name of the index subpartition
BOUND	LONG	Subpartition bound value
SUBPARTITION_NO	NUMBER	Subpartition number
STATUS	VARCHAR(8)	Current status of the index - USABLE - UNUSABLE
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the subpartition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
NUM_ROWS	NUMBER	The number of rows in the index subpartition
LAST_ANALYZED	DATE	Date of the most recent analysis for the subpartition

- See also

[ALL_IND_SUBPARTITIONS](#)

[DBA_IDX_SUBPARTITIONS](#)

[DBA_IND_SUBPARTITIONS](#)

3.2.24. ALL_INDEXES

Displays indexes of all tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
INDEX_TYPE	VARCHAR(25)	Type of the index - NORMAL - FUNCTION-BASED - LOB
TABLE_OWNER	VARCHAR(128)	Owner of the indexed object
TABLE_NAME	VARCHAR(128)	The indexed object
TABLE_TYPE	CHAR(9)	Type of the indexed object - INDEX - TABLE - VIEW - SYNONYM - UNDEFINED
UNIQUENESS	VARCHAR(9)	Whether or not the unique key is indexed. - NONUNIQUE - UNIQUE - UNDEFINED
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace containing the index
INI_TRANS	NUMBER	Value of the INITRANS parameter
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INITIAL_EXTENT	NUMBER	Size of the initial extent

Column Name	Data Type	Description
NEXT_EXTENT	NUMBER	Size of the next extent
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
BLEVEL	NUMBER	Level of B-tree index (The level is 0 for a B-tree with only a root node)
LEAF_BLOCKS	NUMBER	The number of leaf blocks in the index
DISTINCT_KEYS	NUMBER	The number of distinct keys in the index
CLUSTERING_FACTOR	NUMBER	The clustering factor of the index
STATUS	VARCHAR(8)	Indicates whether a nonpartitioned index is VALID or UNUSABLE
NUM_ROWS	NUMBER	The number of rows in the index
LAST_ANALYZED	DATE	Date of the most recent analysis for the table
PARTITIONED	VARCHAR(3)	Whether or not the index is partitioned - YES - NO
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
GENERATED_BY_SYSTEM	VARCHAR(1)	Whether or not the name of the index was generated in the system - Y - N
REFERENTIAL	VARCHAR(3)	Whether the index was automatically generated for corresponding referential integrity constraints

Column Name	Data Type	Description
MAX_EXTENTS	NUMBER	Maximum number of extents that the index can use
INCLUDE_COLUMN	NUMBER	ID of the last column to be included in the primary key index of the index-organized table
MIN_EXTENTS	NUMBER	Minimum number of extents that the index can use
PCT_THRESHOLD	NUMBER	Percentage of the block space allowed per index entry.
VISIBILITY	VARCHAR(9)	Visibility property of an index.
PARAMETERS	VARCHAR(30)	(Not supported)
DOMIDX_STATUS	VARCHAR(12)	(Not supported)
DOMIDX_OPSTATUS	VARCHAR(6)	(Not supported)
DOMIDX_MANAGEMENT	VARCHAR2(14)	(Not supported)

- See also

[DBA_INDEXES](#)

[USER_INDEXES](#)

3.2.25. ALL_IND_COLUMNS

Synonym for ALL_IDX_COLUMNS.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column within the index

Column Name	Data Type	Description
COLUMN_LENGTH	NUMBER	Length of the column within the index
DESCEND	VARCHAR(4)	Sorting order in columns - DESC - ASC

- See also

[ALL_IDX_COLUMNS](#)

[DBA_IDX_COLUMNS](#)

[DBA_IND_COLUMNS](#)

[USER_IDX_COLUMNS](#)

[USER_IND_COLUMNS](#)

3.2.26. ALL_IND_EXPRESSIONS

Synonym for ALL_IDX_EXPRESSIONS.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_EXPRESSION	LONG	Expression of the column within the index

- See also

[ALL_IDX_EXPRESSIONS](#)

[DBA_IDX_EXPRESSIONS](#)

[DBA_IND_EXPRESSIONS](#)

[USER_IDX_EXPRESSIONS](#)

[USER_IND_EXPRESSIONS](#)

3.2.27. ALL_IND_PARTITIONS

Synonym for ALL_IDX_PARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
INDEX_NAME	VARCHAR(128)	Name of the index
COMPOSITE	VARCHAR(3)	Whether or not partition belongs to a composite-partitioned index - YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the partition
SUBPARTITION_COUNT	NUMBER	The number of the subpartitions that belong to the partition
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the index
BLEVEL	NUMBER	Level of B-tree index (The level is 0 for a B-tree with only a root node)
LEAF_BLOCKS	NUMBER	The number of leaf blocks in the index
DISTINCT_KEYS	NUMBER	The number of distinct keys in the index
CLUSTERING_FACTOR	NUMBER	The clustering factor of the index
STATUS	VARCHAR(8)	Current status of the index - USABLE - UNUSABLE

Column Name	Data Type	Description
NUM_ROWS	NUMBER	The number of rows in the index
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
MAX_TRANS	NUMBER	Value of the MAX_TRANS parameter
INITIAL_EXTENT	NUMBER	Value of the INITIAL_EXTENT parameter
MIN_EXTENT	NUMBER	Value of the MIN_EXTENT parameter
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
LAST_ANALYZED	DATE	Date of the most recent analysis for the index partition

- See also

[ALL_IDX_PARTITIONS](#)

[DBA_IDX_PARTITIONS](#)

[DBA_IND_PARTITIONS](#)

[USER_IDX_PARTITIONS](#)

[USER_IND_PARTITIONS](#)

3.2.28. ALL_IND_SUBPARTITIONS

Synonym for ALL_IDX_SUBPARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
INDEX_NAME	VARCHAR(128)	Name of the index
PARTITION_NAME	VARCHAR(128)	Name of the index partition
SUBPARTITION_NAME	VARCHAR(128)	Name of the index subpartition
BOUND	LONG	Subpartition bound value
SUBPARTITION_NO	NUMBER	Subpartition number
STATUS	VARCHAR(8)	Current status of the index - USABLE - UNUSABLE
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the subpartition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO

Column Name	Data Type	Description
NUM_ROWS	NUMBER	The number of rows in the index subpartition
LAST_ANALYZED	DATE	Date of the most recent analysis for the subpartition

- See also

[ALL_IDX_SUBPARTITIONS](#)

[DBA_IDX_SUBPARTITIONS](#)

[DBA_IND_SUBPARTITIONS](#)

3.2.29. ALL_JAVA_ARGUMENTS

Displays all parameters that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the class
NAME	VARCHAR(4000)	Name of the class
METHOD_INDEX	NUMBER	Index of the method
METHOD_NAME	VARCHAR(4000)	Name of the method
ARGUMENT_POSITION	NUMBER	Position of the parameter (start position 1)
ARRAY_DEPTH	NUMBER	Array depth of the parameter type
ARGUMENT_TYPE	VARCHAR(7)	Name of the parameter type
ARGUMENT_CLASS	VARCHAR(4000)	Actual class name for the parameter whose type is class

- See also

[DBA_JAVA_ARGUMENTS](#)

[USER_JAVA_ARGUMENTS](#)

3.2.30. ALL_JAVA_CLASSES

Displays all classes that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the class
NAME	VARCHAR(4000)	Name of the class
MAJOR	NUMBER	Major version of the class defined in JVM
MINOR	NUMBER	Minor version of the class defined in JVM
KIND	VARCHAR2(9)	Type of the class - Interface - Class
ACCESSIBILITY	VARCHAR(9)	Accessibility of the class
IS_INNER	VARCHAR(1)	Whether or not the class is an INNER class
IS_ABSTRACT	VARCHAR(1)	Whether or not the class is an abstract class
IS_FINAL	VARCHAR(1)	Whether or not the class is a final class
STATUS	VARCHAR(7)	Status of the library - VALID - INVALID
SOURCE	VARCHAR(4000)	Source of the class
SUPER	VARCHAR(4000)	Name of the SUPER class
OUTER	VARCHAR(4000)	Name of the OUTER class if the class is an INNER class

- See also

[DBA_JAVA_CLASSES](#)

[USER_JAVA_CLASSES](#)

3.2.31. ALL_JAVA_FIELDS

Displays all fields that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the field
NAME	VARCHAR(4000)	Name of the class
FIELD_INDEX	NUMBER	Index of the field
FIELD_NAME	VARCHAR(4000)	Name of the field
ACCESSIBILITY	VARCHAR(9)	Accessibility of the field
IS_STATIC	VARCHAR(1)	Whether or not the field is a STATIC field
IS_FINAL	VARCHAR(1)	Whether or not the field is a FINAL field
IS_VOLATILE	VARCHAR(1)	Whether or not the field is a VOLATILE field
IS_TRANSIENT	VARCHAR(1)	Whether or not the field is a TRANSIENT field
ARRAY_DEPTH	NUMBER	Array depth of the field type
FIELD_TYPE	VARCHAR(7)	Name of the field type
FIELD_CLASS	VARCHAR(4000)	Actual class name if the field type is class

- See also

[DBA_JAVA_FIELDS](#)

[USER_JAVA_FIELDS](#)

3.2.32. ALL_JAVA_METHODS

Displays all methods that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the method

Column Name	Data Type	Description
NAME	VARCHAR(4000)	Name of the class
METHOD_INDEX	NUMBER	Index of the method
METHOD_NAME	VARCHAR(4000)	Name of the method
ACCESSIBILITY	VARCHAR(9)	Accessibility of the method
IS_STATIC	VARCHAR(1)	Whether or not the method is a STATIC method
IS_FINAL	VARCHAR(1)	Whether or not the method is a FINAL method
IS_SYNCHRONIZED	VARCHAR(1)	Whether or not the method is a SYNCHRONIZED method
IS_NATIVE	VARCHAR(1)	Whether or not the method is a NATIVE method
IS_STRICT	VARCHAR(1)	Whether or not the method is a STRICT method
ARGUMENTS	NUMBER	The number of parameters of the method
THROWS	NUMBER	The number of exceptions sent by the method
ARRAY_DEPTH	NUMBER	Array depth of the return type
RETURN_TYPE	VARCHAR(7)	Name of the return type
RETURN_CLASS	VARCHAR(4000)	Actual class name if the return type is class

- See also

[DBA_JAVA_METHODS](#)

[USER_JAVA_METHODS](#)

3.2.33. ALL_JOBS

Displays all jobs that the current user can access.

- Columns

Column Name	Data Type	Description
JOB	NUMBER	ID of the job

Column Name	Data Type	Description
SCHEMA_USER	NUMBER	Owner ID of the job
NEXT_DATE	DATE	Next job execution date
INTERVAL	VARCHAR(4000)	Interval used to evaluate the value to be set in NEXT_DATE column after the job is executed
BROKEN	VARCHAR(1)	Status of the job - Y: Invalid - N: Valid
FAILURES	NUMBER	The number of successive failures in job executions
WHAT	VARCHAR(4000)	The contents that this job will execute
INSTANCE	NUMBER	Instance number of RDBMS which runs the job
THIS_DATE	DATE	Date that this job started
LAST_DATE	DATE	Date that this job finished successfully

- See also

[DBA_JOBS](#)

[USER_JOBS](#)

3.2.34. ALL_LIBRARIES

Displays all libraries that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the library
LIBRARY_NAME	VARCHAR(128)	Name of the library
FILE_SPEC	VARCHAR(4000)	Path to the library
STATUS	VARCHAR(7)	Status of the library - VALID

Column Name	Data Type	Description
		- INVALID

- See also

[DBA_LIBRARIES](#)

[USER_LIBRARIES](#)

3.2.35. ALL_LOBS

Displays large objects (LOB) which belong to all tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object that contains the LOB
TABLE_NAME	VARCHAR(128)	Name of the table that contains the LOB
COLUMN_NAME	VARCHAR(128)	Name of the LOB column
SEGMENT_NAME	VARCHAR(128)	Name of the LOB segment
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the LOB belongs
INDEX_NAME	VARCHAR(128)	Name of the LOB index
IN_ROW	VARCHAR(3)	Whether STORAGE IN ROW is enabled or not - YES - NO
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
PARTITIONED	VARCHAR(3)	Whether or not the LOB column is in a partitioned table - YES - NO

- See also

[DBA_LOBS](#)

[USER_LOBS](#)

3.2.36. ALL_LOB_PARTITIONS

Displays all LOB partitions that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the LOB column
PARTITION_NAME	VARCHAR(128)	Name of the table partition
LOB_PARTI TION_NAME	VARCHAR(128)	Name of the LOB partition
LOB_INDPART_NAME	VARCHAR(128)	Name of the LOB index partition
PARTITION_NO	NUMBER	Partition number within the table
COMPOSITE	VARCHAR(3)	Whether or not the partition is a composite partition - YES - NO
IN_ROW	VARCHAR(3)	Whether STORAGE IN ROW is enabled or not - YES - NO
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the LOB partition belongs
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool

Column Name	Data Type	Description
		- DEFAULT - KEEP - RECYCLE

- See also

[DBA_LOB_PARTITIONS](#)

[USER_LOB_PARTITIONS](#)

3.2.37. ALL_LOB_SUBPARTITIONS

Displays LOB subpartitions that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the LOB column
PARTITION_NAME	VARCHAR(128)	Name of the table partition
LOB_NAME	VARCHAR(128)	Name of the LOB
LOB_PARTITION_NAME	VARCHAR(128)	Name of the LOB partition
SUBPARTITION_NAME	VARCHAR(128)	Name of the table subpartition
LOB_SUBPARTITION_NAME	VARCHAR(128)	Name of the LOB subpartition
LOB_INDSUBPART_NAME	VARCHAR(128)	Name of the LOB index subpartition
SUBPARTITION_NO	NUMBER	Subpartition number within the table
IN_ROW	VARCHAR(3)	Whether STORAGE IN ROW is enabled or not - YES

Column Name	Data Type	Description
		- NO
TABSPACE_NAME	VARCHAR(128)	Name of the tablespace to which the LOB partition belongs
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE

- See also

[DBA_LOB_SUBPARTITIONS](#)

[USER_LOB_SUBPARTITIONS](#)

3.2.38. ALL_LOG_GROUPS

Displays the log group definitions on the tables accessible to the current user.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the log group definition
LOG_GROUP_NAME	VARCHAR(128)	Name of the log group definition
TABLE_NAME	VARCHAR(128)	Name of the table where the log group is defined
LOG_GROUP_TYPE	VARCHAR(19)	Type of the log group: - PRIMARY KEY LOGGING - UNIQUE KEY LOGGING - FOREIGN KEY LOGGING - ALL COLUMN LOGGING

Column Name	Data Type	Description
		- USER LOG GROUP
ALWAYS	VARCHAR(11)	Y Indicates that the log group is logged whenever a row is updated; N Indicates that the log group is logged whenever a member column is updated.
GENERATED	VARCHAR(14)	Whether the name of the supplemental log group indicates the system generated (GENERATED NAME) or not (USER NAME).

- See also

[DBA_LOG_GROUPS](#)

[USER_LOG_GROUPS](#)

3.2.39. ALL_LOG_GROUP_COLUMNS

Displays columns that are accessible to the current user and that are specified in log groups.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the log group definition
LOG_GROUP_NAME	VARCHAR(128)	Name of the log group definition
TABLE_NAME	VARCHAR(128)	Name of the table where the log group is defined
COLUMN_NAME	VARCHAR(128)	Name of the column or attribute of the object type column specified in the log group definition
POSITION	NUMBER	Original position of the column or attribute in the definition of the object
LOGGING_PROPERT Y	VARCHAR(6)	Indicates whether the column or attribute would be supplementally logged (LOG) or not (NO LOG)

- See also

[DBA_LOG_GROUP_COLUMNS](#)

[USER_LOG_GROUP_COLUMNS](#)

3.2.40. ALL_METHOD_PARAMS

Displays all the method parameters of the type that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of this type
TYPE_NAME	VARCHAR(128)	Name of this type
METHOD_NAME	VARCHAR(128)	Name of this method
METHOD_NO	NUMBER	Number of this method
PARAM_NAME	VARCHAR(128)	Name of this parameter
PARAM_NO	NUMBER	Location of this parameter
PARAM_MODE	VARCHAR(9)	Mode of this parameter
PARAM_TYPE_MOD	VARCHAR(128)	Modifier of this parameter type (not supported)
PARAM_TYPE_OWNER	VARCHAR(128)	Owner of this parameter type
PARAM_TYPE_NAME	VARCHAR(65532)	Name of this parameter type
CHARACTER_SET_NAME	VARCHAR(128)	Name of the Character set (not supported)

- See also

[DBA_METHOD_PARAMS](#)

[USER_METHOD_PARAMS](#)

3.2.41. ALL_METHOD_RESULTS

Displays the result of the method of this type that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of this type

Column Name	Data Type	Description
TYPE_NAME	VARCHAR(128)	Name of this type
METHOD_NAME	VARCHAR(128)	Name of this method
METHOD_NO	NUMBER	Method number of this method
PARAM_TYPE_MOD	VARCHAR(128)	Modifier of this result type (not supported)
PARAM_TYPE_OWNER	VARCHAR(128)	Owner of this result type
PARAM_TYPE_NAME	VARCHAR(65532)	Name of this result type
CHARACTER_SET_NAME	VARCHAR(128)	Name of Character set (not supported)

- See also

[DBA_METHOD_RESULTS](#)

[USER_METHOD_RESULTS](#)

3.2.42. ALL_MVIEWS

Displays all materialized views that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the materialized view
MVIEW_NAME	VARCHAR(128)	Name of the materialized view
CONTAINER_NAME	VARCHAR(128)	Container table name of the materialized view
QUERY	LONG	Defining query of the materialized view.
QUERY_LEN	NUMBER(38)	Length of the defining query in bytes
UPDATABLE	CHAR(1)	Whether or not the materialized view is updatable - Y: Updatable - N: Not updatable

Column Name	Data Type	Description
UPDATE_LOG	CHAR(0)	Update log for an updatable materialized view
MASTER_ROLLBACK_SEG	CHAR(0)	Rollback segment of the master site
MASTER_LINK	CHAR(0)	Database link to the master site
REWRITE_ENABLED	VARCHAR(1)	Whether or not the rewrite of a materialized view query is enabled - Y: rewrite enabled - N: rewrite disabled
REWRITE_CAPABILITY	CHAR(7)	Rewrite capability of the materialized view
REFRESH_MODE	VARCHAR(6)	Refresh mode of the materialized view - Commit - Demand
REFRESH_METHOD	VARCHAR(1)	Refresh method of the materialized view - C (Complete) - F (Fast) - ? (Force) - N (Never)
BUILD_MODE	VARCHAR(9)	Build mode of the materialized view - Immediate - Deferred - Prebuilt
FAST_REFRESHABLE	CHAR(2)	Whether or not the materialized view is eligible for fast refresh
LAST_REFRESH_TYPE	CHAR(2)	The most recent refresh type
LAST_REFRESH_DATE	DATE	The most recent refresh date
STALENESS	VARCHAR(9)	Staleness of the materialized view

Column Name	Data Type	Description
AFTER_FAST_REFRESH	CHAR(2)	Staleness of the materialized view after the expected fast refresh
UNKNOWN_PREBUILT	CHAR(1)	Whether or not the materialized view is of unknown status as it is prebuilt (Y/N)
UNKNOWN_PLSQL_FUNC	CHAR(1)	Whether or not the materialized view is of unknown status as it contains psm function (Y/N)
UNKNOWN_EXTERNAL_TABLE	CHAR(1)	Whether or not the materialized view is of unknown status as it contains external tables (Y/N)
UNKNOWN_CONSIDER_FRESH	CHAR(1)	Whether or not the materialized view is of unknown status as it is marked consider fresh (Y/N)
UNKNOWN_IMPORT	CHAR(1)	Whether or not the materialized view is of unknown status as it is imported (Y/N)
UNKNOWN_TRUSTED_FD	CHAR(1)	Whether or not the materialized view is of unknown status as it uses trusted constraints (Y/N)
COMPILE_STATE	CHAR(5)	Compilation status of the materialized view
USE_NO_INDEX	CHAR(1)	Whether or not the index is used in the materialized view creation - Y: using no index - N: using the default index
STALE_SINCE	VARCHAR(0)	Time passed from when the materialized view became stale
INTERVAL	VARCHAR(2000)	Date function used to compute the next refresh time
REDUCED_PRECISION	VARCHAR(1)	Whether or not the reduced precision is used for prebuilt materialized view (Y/N)
REFRESH_KEY	VARCHAR(11)	Represents the key type which is used to refresh a materialized view. - ROWID: rowid - PRIMARY KEY: primary key column of the base table

- See also

[DBA_MVIEWS](#)

[USER_MVIEWS](#)

3.2.43. ALL_MVIEW_COMMENTS

Displays comments on the materialized views that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the materialized view
MVIEW_NAME	VARCHAR(128)	Name of the materialized view
COMMENTS	VARCHAR(4000)	Comment on the materialized view

- See also

[DBA_MVIEW_COMMENTS](#)

[USER_MVIEW_COMMENTS](#)

3.2.44. ALL_MVIEW_LOGS

Displays all materialized view logs that the current user can access.

- Columns

Column Name	Data Type	Description
LOG_OWNER	VARCHAR2(128)	Owner of the materialized view log
MASTER	VARCHAR2(128)	Name of the master table whose changes are logged
LOG_TABLE	VARCHAR2(128)	Name of the log table
LOG_TRIGGER	VARCHAR2(128)	after-row trigger on the master table which inserts rows into the log
ROWIDS	VARCHAR2(3)	Whether to record the rowid information
PRIMARY_KEY	VARCHAR2(3)	Whether to record the primary key information

Column Name	Data Type	Description
FILTER_COLUMNS	VARCHAR2(3)	Whether to record the filter column information
SEQUENCE	VARCHAR2(3)	Whether to record the sequence information
INCLUDE_NEW_VALUES	VARCHAR2(3)	Whether to record both old and new values - Y: Keeps both old and new values. - N: Keeps old values only.

- See also

[DBA_MVIEW_LOGS](#)

[USER_MVIEW_LOGS](#)

3.2.45. ALL_OBJECTS

Displays all objects that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
OBJECT_NAME	VARCHAR(128)	Name of the object
SUBOBJECT_NAME	VARCHAR(128)	Name of the subobject (For example, partition name)
OBJECT_ID	NUMBER	ID of the object
OBJECT_TYPE	VARCHAR(23)	Type of the object - INDEX - TABLE - VIEW - SYNONYM - SEQUENCE - PROCEDURE - FUNCTION

Column Name	Data Type	Description
		- PACKAGE - PACKAGE BODY - TRIGGER - TABLE PARTITION - INDEX PARTITION - LOB - LOB PARTITION - TABLE SUBPARTITION - INDEX SUBPARTITION - LOB SUBPARTITION - DIRECTORY - UNDEFINED
OBJECT_TYPE_NO	NUMBER	Type number of the object
CREATED	DATE	Date that the object was created
LAST_DDL_TIME	DATE	Date that the modification took effect on the object through DDL statement
TIMESTAMP	VARCHAR(19)	Timestamp for the latest changes on object structure
STATUS	VARCHAR(7)	Status of the object - VALID - INVALID
TEMPORARY	VARCHAR(1)	Whether or not the object is a temporary object - Y - N

- See also

[DBA_OBJECTS](#)

[USER_OBJECTS](#)

3.2.46. ALL_PACKAGE_MEMBER_TYPES

Displays types of the package that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of this type
PACKAGE_NAME	VARCHAR(128)	Package name of this type
TYPE_NAME	VARCHAR(128)	Name of this type
TYPE_NO	NUMBER	Type number of this type
PRECISION	NUMBER	Precision of this type
SCALE	NUMBER	Scale of this type
TYPE_OBJ_ID	NUMBER	Object id of this type
MEMBER_NO	NUMBER	Member number of this type
KIND	NUMBER	Member kind of this type
LIMIT	NUMBER	Limit of this type
COUNT	NUMBER	Count of this type

- See also

[DBA_PACKAGE_MEMBER_TYPES](#)

[USER_PACKAGE_MEMBER_TYPES](#)

3.2.47. ALL_PART_INDEXES

Displays partition information for the partitioned indexes that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the partitioned index
INDEX_NAME	VARCHAR(128)	Name of the partitioned index

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the partitioned table
PARTITIONING_TYPE	VARCHAR(5)	Type of the partition - RANGE - HASH - LIST
SUBPARTITIONING_TYPE	VARCHAR(5)	Type of the composite partition - RANGE - HASH - LIST - NONE
PARTITION_COUNT	NUMBER	The number of partitions
DEF_SUBPARTITION_COUNT	NUMBER	In the case of composite partition, the default number for the number of subpartitions (when only it is defined)
PARTITIONING_KEY_COUNT	NUMBER	The number of columns used as partitioning key
SUBPARTITIONING_KEY_COUNT	NUMBER	For a composite partition, the number of columns used as subpartitioning key
LOCALITY	VARCHAR(6)	Whether the index is a local index or global index - LOCAL: Local index - GLOBAL: Global index
ALIGNMENT	VARCHAR(12)	Whether or not the partitioned key column is prefixed - PREFIXED: prefixed - NON_PREFIXED: not prefixed
DEF_TABLESPACE_NAME	VARCHAR(128)	Name of the default tablespace used to add or split a partition
DEF_PCT_FREE	NUMBER	Default value of PCTFREE used to add a partition
DEF_INI_TRANS	NUMBER	Default value of INITRANS used to add a partition.

Column Name	Data Type	Description
DEF_NEXT_EXTENT	NUMBER	Default value of NEXT_EXTENT used to add a partition
DEF_MAX_EXTENTS	NUMBER	Default value of MAX_EXTENTS used to add a partition
DEF_BUFFER_POOL	VARCHAR(7)	Default value of buffer pool type used to add a partition - DEFAULT - KEEP - RECYCLE

- See also

[DBA_PART_INDEXES](#)

[USER_PART_INDEXES](#)

3.2.48. ALL_PART_KEY_COLUMNS

Displays partitioning key columns of the partitioned tables or indexes that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the partitioned table or index
NAME	VARCHAR(128)	Name of the partitioned table or index
OBJECT_TYPE	CHAR(5)	Type of the partition - TABLE - INDEX
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column within the partitioning key

- See also

[DBA_PART_KEY_COLUMNS](#)

[USER_PART_KEY_COLUMNS](#)

3.2.49. ALL_PART_LOBS

Displays LOBs which belong to all partitioned tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the partitioned table
TABLE_NAME	VARCHAR(128)	Name of the partitioned table
COLUMN_NAME	VARCHAR(128)	Name of the LOB column
LOB_NAME	VARCHAR(128)	Name of the LOB
LOB_INDEX_NAME	VARCHAR(128)	Name of the LOB index
DEF_IN_ROW	VARCHAR(3)	Whether STORAGE IN ROW used by default to add or split a partition is enabled or not - YES - NO
DEF_TABLESPACE_NAME	VARCHAR(128)	Name of the default tablespace used to add or split a partition
DEF_NEXT_EXTENT	NUMBER	Default value of NEXT_EXTENT used to add a partition
DEF_MAX_EXTENTS	NUMBER	Default value of MAX_EXTENTS used to add a partition
DEF_BUFFER_POOL	VARCHAR(7)	Default value of buffer pool type used to add a partition - DEFAULT - KEEP - RECYCLE

- See also

[DBA_PART_LOBS](#)

[USER_PART_LOBS](#)

3.2.50. ALL_PART_TABLES

Displays partitioning information of all partitioned tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the partitioned table
TABLE_NAME	VARCHAR(128)	Name of the partitioned table
PARTITIONING_TYPE	VARCHAR(5)	Type of the partitioning method - RANGE - HASH - LIST
SUBPARTITIONING_TYPE	VARCHAR(5)	Type of the composite partition - RANGE - HASH - LIST - NONE
PARTITION_COUNT	NUMBER	The number of partitions
DEF_SUBPARTITION_COUNT	NUMBER	For a composite partition, the number of subpartitions (only when it is defined)
PARTITIONING_KEY_COUNT	NUMBER	The number of columns participating in the partitioning key
SUBPARTITIONING_KEY_COUNT	NUMBER	For a composite partition, the number of columns used as subpartitioning key
DEF_TABLESPACE_NAME	VARCHAR(128)	Name of default tablespace used to add or split a partition
DEF_PCT_FREE	NUMBER	Default value of PCTFREE used to add a partition
DEF_INI_TRANS	NUMBER	Default value of INITRANS used to add a partition
DEF_NEXT_EXTENT	NUMBER	Default value of NEXT_EXTENT used to add a partition

Column Name	Data Type	Description
DEF_MAX_EXTENTS	NUMBER	Default value of MAX_EXTENTS used to add a partition
DEF_BUFFER_POOL	VARCHAR(7)	Default value of buffer pool type used to add a partition - DEFAULT - KEEP - RECYCLE
MAX_TRANS	NUMBER	Value of the MAX_TRANS parameter
INITIAL_EXTENT	NUMBER	Value of the INITIAL_EXTENT parameter
MIN_EXTENT	NUMBER	Value of the MIN_EXTENT parameter
INTERVAL	VARCHAR(128)	String of the interval values

- See also

[DBA_PART_TABLES](#)

[USER_PART_TABLES](#)

3.2.51. ALL_PROCEEDURES

Displays all procedures defined in all procedures and tables that the current user owns.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the procedure
OBJECT_NAME	VARCHAR(128)	Name of the object
PROCEDURE_NAME	VARCHAR(128)	Name of the procedure
AGGREGATE	CHAR(2)	Whether or not it is an AGGREGATE function
PIPELINED	CHAR(2)	Whether or not the table function is pipelined
IMPLTYPEOWNER	CHAR(0)	Owner of the IMPLEMENTATION type
IMPLTYPENAME	CHAR(0)	Name of the IMPLEMENTATION type

Column Name	Data Type	Description
PARALLEL	CHAR(2)	Whether PARALLEL is enabled or not
INTERFACE	CHAR(2)	Whether or not it is an INTERFACE function
DETERMINISTIC	CHAR(2)	Whether or not it is a DETERMINISTIC function
FUNCTIONABLE	VARCHAR(3)	Whether or not it is a function
WRAPPED	VARCHAR(3)	Whether or not it is encrypted (deprecated)
AUTHID	VARCHAR(7)	Name of AUTHID
MEMBER_NO	NUMBER	Index of its object

- See also

[DBA_PROCEEDURES](#)

[USER_PROCEEDURES](#)

3.2.52. ALL_QUEUES

Describes all queues on which the current user has enqueue or dequeue privileges.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the queue
NAME	VARCHAR(128)	Name of the queue
QUEUE_TABLE	VARCHAR(128)	Name of the queue table
QID	NUMBER	Object number of the queue
QUEUE_TYPE	VARCHAR(20)	Type of the queue - EXCEPTION_QUEUE - NON_PERSISTENT_QUEUE - NORMAL_QUEUE
MAX_RETRIES	NUMBER	Maximum number of retries allowed when dequeuing from the queue

Column Name	Data Type	Description
RETRY_DELAY	NUMBER	Time interval between retries
ENQUEUE_ENABLED	VARCHAR(3)	Indicates whether the queue is enabled for enqueue (YES) or not (NO)
DEQUEUE_ENABLED	VARCHAR(3)	Indicates whether the queue is enabled for dequeue (YES) or not (NO)
RETENTION	VARCHAR(256)	Time interval (in seconds) processed messages are retained in the queue, or FOREVER
USER_COMMENT	VARCHAR(100)	User specified comment

- See also

[DBA_QUEUES](#)

[USER_QUEUES](#)

3.2.53. ALL_QUEUE_SUBSCRIBERS

Shows the list of subscribers that the current user has privilege to dequeue from.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the queue
QUEUE_NAME	VARCHAR(128)	Name of the queue
QUEUE_TABLE	VARCHAR(128)	Name of the queue table on which the queue is defined
CONSUMER_NAME	VARCHAR(128)	Name of the subscriber
ADDRESS	VARCHAR(1024)	Address of the subscriber
PROTOCOL	NUMBER	Protocol of the subscriber
TRANSFORMATION	VARCHAR(0)	Transformation for the subscriber
RULE	VARCHAR(0)	Rule condition for the subscriber
DELIVERY_MODE	CHAR(10)	Message delivery mode for the subscriber

Column Name	Data Type	Description
IF_NON DURABLE_SUB SCRIBER	CHAR(2)	Indicates whether the subscriber is a non-durable subscriber (YES) or not (NO)
QUEUE_TO_QUEUE	CHAR(5)	Indicates whether the subscriber is a queue-to-queue subscriber (TRUE) or not (FALSE)

- See also

[DBA_QUEUE_SUBSCRIBERS](#)

[USER_QUEUE_SUBSCRIBERS](#)

3.2.54. ALL_QUEUE_TABLES

Describes the queues in the queue tables accessible to the current user.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the queue table
QUEUE_TABLE	VARCHAR(128)	Name of the queue table
TYPE	VARCHAR(6)	Type of user data - RAW: Raw type - OBJECT: User-defined object type
OBJECT_TYPE	VARCHAR(0)	Object type of the payload when TYPE is OBJECT
SORT_ORDER	VARCHAR(22)	User-specified sort order
RECIPIENTS	VARCHAR(8)	SINGLE or MULTIPLE recipients
MESSAGE_GROUP ING	VARCHAR(13)	NONE or TRANSACTIONAL
PRIMARY_INSTANCE	NUMBER	Indicates the instance number of the instance which is the primary owner of the queue table. A value of 0 indicates that there is no primary owner
SECONDARY_IN STANCE	NUMBER	Indicates the instance number of the instance which is the secondary owner of the queue table. This instance

Column Name	Data Type	Description
		becomes the owner of the queue table if the primary owner is not alive. A value of 0 indicates that there is no secondary owner
OWNER_INSTANCE	NUMBER	Instance number of the instance which currently owns the queue table
USER_COMMENT	VARCHAR(100)	User specified comment

- See also

[DBA_QUEUE_TABLES](#)

[USER_QUEUE_TABLES](#)

3.2.55. ALL_RECYCLEBIN

Displays information of all temporarily deleted objects that the current user can access.

- Columns

Column Name	Data Type	Description
OBJECT_NAME	VARCHAR(128)	Current name of the object
ORIGINAL_NAME	VARCHAR(128)	Original name of the object
TYPE	VARCHAR(7)	Type of the object - Table - Index - Trigger
TS_NAME	VARCHAR(128)	Name of the tablespace containing the object
CREATETIME	VARCHAR(19)	Timestamp for the object creation
DROPTIME	VARCHAR(19)	Timestamp for the object deletion
DROPTSN	NUMBER	TSN of the transaction which dropped the object
BASE_OBJECT	VARCHAR(256)	Object ID of the base object

Column Name	Data Type	Description
SPACE	VARCHAR(0)	Number of blocks used by the object

- See also

[DBA_RECYCLEBIN](#)

[USER_RECYCLEBIN](#)

3.2.56. ALL_SCHEDULER_CHAINS

Displays all scheduler chains that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
CHAIN_NAME	VARCHAR2(30)	Name of the chain
RULE_SET_NAME	VARCHAR2(30)	This column is for future use.
EVALUATION_INTERVAL	INTERVAL	This column is for future use.
COMMENTS	VARCHAR2(240)	Comments on the chain

- See also

[DBA_SCHEDULER_CHAINS](#)

[USER_SCHEDULER_CHAINS](#)

3.2.57. ALL_SCHEDULER_JOBS

Displays all scheduler jobs that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
JOB_NAME	VARCHAR2(30)	Name of the job

Column Name	Data Type	Description
JOB_SUBNAME	VARCHAR2(30)	Subname of the job (for a job in chain)
JOB_STYLE	VARCHAR2(11)	This column is for future use.
JOB_CREATOR	VARCHAR2(30)	This column is for future use.
CLIENT_ID	VARCHAR2(64)	This column is for future use.
GLOBAL_UID	VARCHAR2(32)	This column is for future use.
PROGRAM_OWNER	VARCHAR2(128)	This column is for future use.
PROGRAM_NAME	VARCHAR2(30)	This column is for future use.
JOB_TYPE	VARCHAR2(16)	Job action type: - PSM_BLOCK - CHAIN
JOB_ACTION	VARCHAR2(4000)	Job action
NUMBER_OF_ARGUMENTS	NUMBER	This column is for future use.
SCHEDULE_OWNER	VARCHAR2(4000)	This column is for future use.
SCHEDULE_NAME	VARCHAR2(4000)	This column is for future use.
SCHEDULE_TYPE	VARCHAR2(12)	This column is for future use.
START_DATE	TIMESTAMP(6)	Start date of the job
REPEAT_INTERVAL	VARCHAR2(4000)	Cron expression
EVENT_QUEUE_OWNER	VARCHAR2(30)	This column is for future use.
EVENT_QUEUE_NAME	VARCHAR2(30)	This column is for future use.
EVENT_QUEUE_AGENT	VARCHAR2(256)	This column is for future use.
EVENT_CONDITION	VARCHAR2(4000)	This column is for future use.
EVENT_RULE	VARCHAR2(65)	This column is for future use.
FILE_WATCHER_OWNER	VARCHAR2(65)	This column is for future use.

Column Name	Data Type	Description
FILE_WATCHER_NAME	VARCHAR2(65)	This column is for future use.
END_DATE	TIMESTAMP(6)	Date after which the job will no longer run
JOB_CLASS	VARCHAR2(30)	This column is for future use.
ENABLED	VARCHAR2(5)	Indicates whether the job is enabled (TRUE) or not (FALSE)
AUTO_DROP	VARCHAR2(5)	This column is for future use.
RESTARTABLE	VARCHAR2(5)	This column is for future use.
STATE	VARCHAR2(15)	This column is for future use.
JOB_PRIORITY	NUMBER	This column is for future use.
RUN_COUNT	NUMBER	This column is for future use.
MAX_RUNS	NUMBER	This column is for future use.
FAILURE_COUNT	NUMBER	This column is for future use.
MAX_FAILURES	NUMBER	This column is for future use.
RETRY_COUNT	NUMBER	This column is for future use.
LAST_START_DATE	TIMESTAMP(6)	This column is for future use.
LAST_RUN_DURATION	INTERVAL	This column is for future use.
NEXT_RUN_DATE	TIMESTAMP(6)	This column is for future use.
SCHEDULE_LIMIT	INTERVAL	This column is for future use.
MAX_RUN_DURATION	INTERVAL	This column is for future use.
LOGGING_LEVEL	VARCHAR2(11)	This column is for future use.
STOP_ON_WINDOW_CLOSE	VARCHAR2(5)	This column is for future use.
INSTANCE_STICKINESS	VARCHAR2(5)	This column is for future use.

Column Name	Data Type	Description
RAISE_EVENTS	VARCHAR2(4000)	This column is for future use.
SYSTEM	VARCHAR2(5)	This column is for future use.
JOB_WEIGHT	NUMBER	This column is for future use.
NLS_ENV	VARCHAR2(4000)	This column is for future use.
SOURCE	VARCHAR2(128)	This column is for future use.
NUMBER_OF_DESTINATIONS	NUMBER	This column is for future use.
DESTINATION_OWNER	VARCHAR2(128)	This column is for future use.
DESTINATION	VARCHAR2(128)	This column is for future use.
CREDENTIAL_OWNER	VARCHAR2(30)	This column is for future use.
CREDENTIAL_NAME	VARCHAR2(30)	This column is for future use.
INSTANCE_ID	NUMBER	ID of the instance (for TAC)
DEFERRED_DROP	VARCHAR2(5)	This column is for future use.
ALLOW_RUNS_IN_RESTRICTED_MODE	VARCHAR2(5)	This column is for future use.
COMMENTS	VARCHAR2(240)	Comments on the job
FLAGS	NUMBER	This column is for internal use.
JOB_ID	NUMBER	This column is for internal use.
CHAIN_NAME	VARCHAR2(30)	This column is for internal use.
STEP_NAME	VARCHAR2(30)	This column is for internal use.
CTX_ID	NUMBER	This column is for internal use.

- See also

[DBA_SCHEDULER_JOBS](#)

[USER_SCHEDULER_JOBS](#)

3.2.58. ALL_SCHEDULER_PROGRAMS

Displays all scheduler programs that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
PROGRAM_NAME	VARCHAR2(128)	Name of the program
PROGRAM_TYPE	VARCHAR2(16)	Type of the program - PSM_BLOCK
PROGRAM_ACTION	VARCHAR2(4000)	Program action
NUMBER_OF_ARGUMENTS	NUMBER	This column is for future use.
ENABLED	VARCHAR2(5)	Indicates whether the program is enabled (TRUE) or not (FALSE)
DETACHED	VARCHAR2(5)	This column is for future use.
SCHEDULE_LIMIT	INTERVAL	This column is for future use.
PRIORITY	NUMBER	This column is for future use.
WEIGHT	NUMBER	This column is for future use.
MAX_RUNS	NUMBER	This column is for future use.
MAX_FAILURES	NUMBER	This column is for future use.
MAX_RUN_DURATION	INTERVAL	This column is for future use.
NLS_ENV	VARCHAR2(4000)	This column is for future use.
COMMENTS	VARCHAR2(240)	Comments on the program

- See also

[DBA_SCHEDULER_PROGRAMS](#)

[USER_SCHEDULER_PROGRAMS](#)

3.2.59. ALL_SCHEDULER_RULES

Displays all scheduler rules that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
CHAIN_NAME	VARCHAR2(30)	Name of the chain
CONDITION	VARCHAR2(4000)	Condition of the rule
ACTION	VARCHAR2(4000)	Action of the rule
RULE_NAME	VARCHAR2(30)	Name of the rule
COMMENTS	VARCHAR2(240)	Comments on the rule

- See also

[DBA_SCHEDULER_RULES](#)

[USER_SCHEDULER_RULES](#)

3.2.60. ALL_SCHEDULER_RULE_CTX

Displays all scheduler rule ctx that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
CHAIN_NAME	VARCHAR2(30)	Name of the chain
CONDITION	VARCHAR2(4000)	Condition of the rule
ACTION	VARCHAR2(4000)	Action of the rule
RULE_NAME	VARCHAR2(30)	Name of the rule
CTX_ID	NUMBER	ID of the context (for internal use)

- See also

[DBA_SCHEDULER_RULE_CTX](#)

[USER_SCHEDULER_RULE_CTX](#)

3.2.61. ALL_SCHEDULER_RUNNING_JOBS

Displays all scheduler running jobs that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
JOB_NAME	VARCHAR2(30)	Name of the job
JOB_SUBNAME	VARCHAR2(30)	Subname of the job (for a job in chain)
JOB_STYLE	VARCHAR2(11)	This column is for future use.
JOB_CREATOR	VARCHAR2(30)	This column is for future use.
CLIENT_ID	VARCHAR2(64)	This column is for future use.
GLOBAL_UID	VARCHAR2(32)	This column is for future use.
PROGRAM_OWNER	VARCHAR2(128)	This column is for future use.
PROGRAM_NAME	VARCHAR2(30)	This column is for future use.
JOB_TYPE	VARCHAR2(16)	Job action type: - PSM_BLOCK - CHAIN
JOB_ACTION	VARCHAR2(4000)	Job action
NUMBER_OF_ARGUMENTS	NUMBER	This column is for future use.
SCHEDULE_OWNER	VARCHAR2(4000)	This column is for future use.
SCHEDULE_NAME	VARCHAR2(4000)	This column is for future use.
SCHEDULE_TYPE	VARCHAR2(12)	This column is for future use.

Column Name	Data Type	Description
START_DATE	TIMESTAMP(6)	Start date of the job
REPEAT_INTERVAL	VARCHAR2(4000)	Cron expression
EVENT_QUEUE_OWNER	VARCHAR2(30)	This column is for future use.
EVENT_QUEUE_NAME	VARCHAR2(30)	This column is for future use.
EVENT_QUEUE_AGENT	VARCHAR2(256)	This column is for future use.
EVENT_CONDITION	VARCHAR2(4000)	This column is for future use.
EVENT_RULE	VARCHAR2(65)	This column is for future use.
FILE_WATCHER_OWNER	VARCHAR2(65)	This column is for future use.
FILE_WATCHER_NAME	VARCHAR2(65)	This column is for future use.
END_DATE	TIMESTAMP(6)	Date after which the job will no longer run
JOB_CLASS	VARCHAR2(30)	This column is for future use.
ENABLED	VARCHAR2(5)	Indicates whether the job is enabled (TRUE) or not (FALSE)
AUTO_DROP	VARCHAR2(5)	This column is for future use.
RESTARTABLE	VARCHAR2(5)	This column is for future use.
STATE	VARCHAR2(15)	This column is for future use.
JOB_PRIORITY	NUMBER	This column is for future use.
RUN_COUNT	NUMBER	This column is for future use.
MAX_RUNS	NUMBER	This column is for future use.
FAILURE_COUNT	NUMBER	This column is for future use.
MAX_FAILURES	NUMBER	This column is for future use.
RETRY_COUNT	NUMBER	This column is for future use.
LAST_START_DATE	TIMESTAMP(6)	This column is for future use.

Column Name	Data Type	Description
LAST_RUN_DURATION	INTERVAL	This column is for future use.
NEXT_RUN_DATE	TIMESTAMP(6)	This column is for future use.
SCHEDULE_LIMIT	INTERVAL	This column is for future use.
MAX_RUN_DURATION	INTERVAL	This column is for future use.
LOGGING_LEVEL	VARCHAR2(11)	This column is for future use.
STOP_ON_WINDOW_CLOSE	VARCHAR2(5)	This column is for future use.
INSTANCE_STICKINESS	VARCHAR2(5)	This column is for future use.
RAISE_EVENTS	VARCHAR2(4000)	This column is for future use.
SYSTEM	VARCHAR2(5)	This column is for future use.
JOB_WEIGHT	NUMBER	This column is for future use.
NLS_ENV	VARCHAR2(4000)	This column is for future use.
SOURCE	VARCHAR2(128)	This column is for future use.
NUMBER_OF_DESTINATIONS	NUMBER	This column is for future use.
DESTINATION_OWNER	VARCHAR2(128)	This column is for future use.
DESTINATION	VARCHAR2(128)	This column is for future use.
CREDENTIAL_OWNER	VARCHAR2(30)	This column is for future use.
CREDENTIAL_NAME	VARCHAR2(30)	This column is for future use.
INSTANCE_ID	NUMBER	ID of the instance (for TAC)
DEFERRED_DROP	VARCHAR2(5)	This column is for future use.
ALLOW_RUNS_IN_RESTRICTED_MODE	VARCHAR2(5)	This column is for future use.
COMMENTS	VARCHAR2(240)	Comments on the job

Column Name	Data Type	Description
FLAGS	NUMBER	This column is for internal use.
JOB_ID	NUMBER	This column is for internal use.
CHAIN_NAME	VARCHAR2(30)	This column is for internal use.
STEP_NAME	VARCHAR2(30)	This column is for internal use.
CTX_ID	NUMBER	This column is for internal use.

- See also

[DBA_SCHEDULER_RUNNING_JOBS](#)

[USER_SCHEDULER_RUNNING_JOBS](#)

3.2.62. ALL_SCHEDULER_STEPS

Displays all scheduler steps that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
CHAIN_NAME	VARCHAR2(30)	Name of the chain
STEP_NAME	VARCHAR2(30)	Name of the step
PROGRAM_NAME	VARCHAR2(30)	Name of the program
COMMENTS	VARCHAR2(240)	Comments on the step

- See also

[DBA_SCHEDULER_STEPS](#)

[USER_SCHEDULER_STEPS](#)

3.2.63. ALL_SCHEDULER_STEP_CTX

Displays all scheduler step context the current user can access.

- Columns

Column Name	Data Type	Description
OWNER_ID	NUMBER	ID of the owner
CHAIN_NAME	VARCHAR2(30)	Name of the chain
STEP_NAME	VARCHAR2(30)	Name of the step
CTX_ID	NUMBER	This column is for internal use.
JOB_ID	NUMBER	ID of the job
INSTANCE_ID	NUMBER	ID of the instance (for TAC)
COMPLETED	VARCHAR2(5)	State of the step context (completed or not)
STATE	VARCHAR2(16)	State of the step context
START_DATE	TIMESTAMP(6)	This column is for internal use.
END_DATE	TIMESTAMP(6)	This column is for internal use.
ERROR_CODE	NUMBER	This column is for internal use.
DURATION	INTERVAL	This column is for future use.

- See also

[DBA_SCHEDULER_STEP_CTX](#)

[USER_SCHEDULER_STEP_CTX](#)

3.2.64. ALL_SEGMENTS

Displays all segments that the current user can access.

- Columns

Column Name	Data Type	Description
SEGMENT_NAME	VARCHAR(128)	Name of the segment
PARTITION_NAME	VARCHAR(128)	Partition number of the object (Set to NULL for non-partitioned objects)

Column Name	Data Type	Description
SEGMENT_TYPE	VARCHAR(18)	Type of the segment - TABLE - TABLE PARTITION - TABLE SUBPARTITION - LOB - INDEX - INDEX PARTITION - INDEX SUBPARTITION - LOB - LOB PARTITION - LOB SUBPARTITION - UNDO
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace containing the segment
HEADER_FILE	NUMBER	ID of the file containing the segment header
HEADER_BLOCK	NUMBER	ID of the block containing the segment header
BLOCKS	NUMBER	Size of the segment in blocks
EXTENTS	NUMBER	Size of the segment in extents
RELATIVE_FNO	NUMBER	Relative file number of the segment header
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
MAX_EXTENTS	NUMBER	Maximum number of extents that the segment can use
BYTES	NUMBER	Size of segment in bytes
INITIAL_EXTENT	NUMBER	Size in bytes requested for the initial extent of the segment

Column Name	Data Type	Description
NEXT_EXTENT	NUMBER	Size in bytes of the next extent to be allocated to the segment

- See also

[DBA_SEGMENTS](#)

[USER_SEGMENTS](#)

3.2.65. ALL_SEQUENCES

Displays all sequences that the current user can access.

- Columns

Column Name	Data Type	Description
SEQUENCE_OWNER	VARCHAR(128)	Owner of the sequence
SEQUENCE_NAME	VARCHAR(128)	Name of the sequence
MIN_VALUE	NUMBER	Minimum value of the sequence
MAX_VALUE	NUMBER	Maximum value of the sequence
INCREMENT_BY	NUMBER	Increment value of the sequence
CYCLE_FLAG	VARCHAR(1)	Whether the sequence is reused when the maximum value is reached - Y - N - E
ORDER_FLAG	CHAR(1)	Whether sequences are generated in order - Y
IF_AVAIL	VARCHAR(1)	Whether the last value is readable - Y - N - E

Column Name	Data Type	Description
CACHE_SIZE	NUMBER	The number of cached sequences
LAST_NUMBER	NUMBER	Last sequence number to be written to disk

- See also

[DBA_SEQUENCES](#)

[USER_SEQUENCES](#)

3.2.66. ALL_SOURCE

Displays source texts of the stored objects that the current user can access such as procedures, functions, package bodies, or triggers.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
NAME	VARCHAR(128)	Name of the object
TYPE	VARCHAR(12)	Type of the object - PROCEDURE - FUNCTION - PACKAGE - PACKAGE BODY - TRIGGER - TYPE - TYPE BODY - UNDEFINED
LINE	NUMBER	Line number of the source
TEXT	VARCHAR(4000)	Source text

- See also

[DBA_SOURCE](#)

[USER_SOURCE](#)

3.2.67. ALL_SUBPART_KEY_COLUMNS

Displays subpartitioning key columns of the partitioned tables or indexes that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the partitioned table or index
NAME	VARCHAR(128)	Name of the partitioned table or index
OBJECT_TYPE	VARCHAR(5)	Type of the object - TABLE - INDEX
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column within the subpartitioning key

- See also

[DBA_SUBPART_KEY_COLUMNS](#)

[USER_SUBPART_KEY_COLUMNS](#)

3.2.68. ALL_SYNONYMS

Displays all synonyms that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the synonym
SYNONYM_NAME	VARCHAR(128)	Name of the synonym
ORG_OBJECT_OWNER	VARCHAR(128)	Owner of the object to which the synonym refers

Column Name	Data Type	Description
ORG_OBJECT_NAME	VARCHAR(257)	Name of the object to which the synonym refers

- See also

[DBA_SYNONYMS](#)

[USER_SYNONYMS](#)

3.2.69. ALL_TABLES

Displays all tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace that contains the table
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
NUM_ROWS	NUMBER	The number of rows within the table
BLOCKS	NUMBER	The number of data blocks containing information about the table
AVG_ROW_LEN	NUMBER	Average length of rows within the table (in bytes)
DEGREE	NUMBER	The number of threads used for table scanning
SAMPLE_SIZE	NUMBER	Size of the sample used for analyzing statistics for the table
LAST_ANALYZED	DATE	Date of the most recent analysis for the table

Column Name	Data Type	Description
PARTITIONED	VARCHAR(3)	Whether partitioning is used or not - YES - NO
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
ROW_MOVEMENT	VARCHAR(8)	Whether or not partitioned row movement is enabled - ENABLED - DISABLED
DURATION	VARCHAR(11)	Retention period of the temporary table - SESSION: Rows are preserved during the session period - TRANSACTION: Rows are deleted at every commit
COMPRESSION	VARCHAR(3)	Whether or not the table has been compressed - YES - NO
COMPRESS_FOR	VARCHAR(12)	Compression level of the table - QUERY LOW - QUERY HIGH - ARCHIVE LOW - ARCHIVE HIGH - NULL
DROPPED	VARCHAR(3)	Whether or not the table has been dropped - YES - NO
READ_ONLY	VARCHAR(3)	Whether or not the table is in read-only mode

Column Name	Data Type	Description
		- YES - NO
TEMPORARY	VARCHAR(3)	Whether or not the table is temporary - YES - NO
IOT_TYPE	VARCHAR(12)	If the table is an index-organized table, the IOT_TYPE is IOT or IOT_OVERFLOW. If the table is not an index-organized table, the IOT_TYPE is NULL - IOT - IOT_OVERFLOW - NULL
MAX_EXTENTS	NUMBER	Maximum number of extents that the table can use
INITIAL_EXTENT	NUMBER	Size in bytes of the initial extent
NEXT_EXTENT	NUMBER	Size in bytes of the next extent to be allocated to the table
MIN_EXTENTS	NUMBER	Minimum number of extents that the table can use
IS_VIRTUAL	VARCHAR(1)	Whether or not the table is virtual

- See also

[DBA_TABLES](#)

[USER_TABLES](#)

3.2.70. ALL_TAB_COLS

Synonym for ALL_TBL_COLS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table or view

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
NUM_NULLS	NUMBER	(Not supported)
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column
HIDDEN_COLUMN	CHAR(3)	(Not supported)
SEGMENT_COLUMN_ID	VARCHAR(3)	(Not supported)
INTERNAL_COLUMN_ID	VARCHAR(3)	(Not supported)
QUALIFIED_COLUMN_NAME	VARCHAR(4000)	(Not supported)
OBJ_ID	NUMBER	ID of the object

- See also

[ALL_TBL_COLS](#)

[DBA_TAB_COLS](#)

[DBA_TBL_COLS](#)

[USER_TAB_COLS](#)

[USER_TBL_COLS](#)

3.2.71. ALL_TAB_COLUMNS

Synonym for ALL_TBL_COLUMNS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table or view
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)

Column Name	Data Type	Description
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column
OBJ_ID	NUMBER	ID of the object

- See also

[ALL_TBL_COLUMNS](#)

[ALL_TBL_COLUMNS_WITH_DNO](#)

[DBA_TAB_COLUMNS](#)

[DBA_TBL_COLUMNS](#)

[USER_TAB_COLUMNS](#)

[USER_TBL_COLUMNS](#)

3.2.72. ALL_TAB_COL_STATISTICS

Synonym for ALL_TBL_COL_STATISTICS.

- Columns

Column Name	Data Type	Description
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
NUM_DISTINCT	NUMBER	The number of distinct values
LOW_VALUE	VARCHAR(4000)	The lowest value in the column
HIGH_VALUE	VARCHAR(4000)	The highest value in the column
DENSITY	NUMBER	Density of the column
NUM_NULLS	NUMBER	The number of NULL values
NUM_BUCKETS	NUMBER	The number of buckets for the histogram
LAST_ANALYZED	DATE	Date of the most recent analysis for the column

Column Name	Data Type	Description
SAMPLE_SIZE	NUMBER	Size of the sample used for analyzing statistics for the column
AVG_COL_LEN	NUMBER	Average length of the column (in bytes)
HISTOGRAM	VARCHAR(15)	Indicates the type of histogram

- See also

[ALL_TBL_COL_STATISTICS](#)

[DBA_TAB_COL_STATISTICS](#)

[DBA_TBL_COL_STATISTICS](#)

[USER_TAB_COL_STATISTICS](#)

[USER_TBL_COL_STATISTICS](#)

3.2.73. ALL_TAB_COMMENTS

Displays comments on the tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
TABLE_TYPE	VARCHAR(9)	Type of the object
COMMENTS	VARCHAR(4000)	Comment on the object

- See also

[ALL_TBL_COMMENTS](#)

[DBA_TAB_COMMENTS](#)

[DBA_TBL_COMMENTS](#)

3.2.74. ALL_TAB_HISTOGRAMS

Synonym for ALL_TBL_HISTOGRAMS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
ENDPOINT_NUMBER	NUMBER	History bucket number
ENDPOINT_VALUE	NUMBER	End point value of the current bucket
ENDPOINT_ACTUAL_VALUE	VARCHAR(4000)	Actual string value of the end point value of the current bucket

- See also

[ALL_TBL_HISTOGRAMS](#)

[DBA_TAB_HISTOGRAMS](#)

[DBA_TBL_HISTOGRAMS](#)

[USER_TAB_HISTOGRAMS](#)

[USER_TBL_HISTOGRAMS](#)

3.2.75. ALL_TAB_PARTITIONS

Synonym for ALL_TBL_PARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
COMPOSITE	VARCHAR(3)	Whether or not the partition belongs to a composite-partitioned table

Column Name	Data Type	Description
		- YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the table partition
SUBPARTITION_COUNT	NUMBER	The number of subpartitions which belong to the partition
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the table
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
COMPRESSION	VARCHAR(3)	Whether or not the table partition has been compressed - YES - NO
COMPRESS_FOR	VARCHAR(12)	Compression level of the partition - QUERY LOW - QUERY HIGH - ARCHIVE LOW - ARCHIVE HIGH - NULL
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
NUM_ROWS	NUMBER	The number of rows within the table partition

Column Name	Data Type	Description
BLOCKS	NUMBER	The number of data blocks containing information about the table partition
LAST_ANALYZED	DATE	Date of the most recent analysis for the table partition
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO

- See also

[ALL_TBL_PARTITIONS](#)

[DBA_TAB_PARTITIONS](#)

[DBA_TBL_PARTITIONS](#)

[USER_TAB_PARTITIONS](#)

[USER_TBL_PARTITIONS](#)

3.2.76. ALL_TAB_PRIVS

Synonym for ALL_TBL_PRIVS.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with GRANT OPTION - YES - NO

- See also

[ALL_TBL_PRIVS](#)

[DBA_TAB_PRIVS](#)

[DBA_TBL_PRIVS](#)

[USER_TAB_PRIVS](#)

[USER_TBL_PRIVS](#)

3.2.77. ALL_TAB_PRIVS_MADE

Synonym for ALL_TBL_PRIVS_MADE.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Name of the object owner
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO

- See also

[ALL_TBL_PRIVS_MADE](#)

[USER_TAB_PRIVS_MADE](#)

[USER_TBL_PRIVS_MADE](#)

3.2.78. ALL_TAB_PRIVS_RECD

Synonym for ALL_TBL_PRIVS_RECD.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Name of the object owner
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO

- See also

[ALL_TBL_PRIVS_RECD](#)

3.2.79. ALL_TAB_SUBPARTITIONS

Synonym for ALL_TBL_SUBPARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
PARTITION_NAME	VARCHAR(128)	Name of the table partition
SUBPARTITION_NAME	VARCHAR(128)	Name of the table subpartition
BOUND	LONG	Subpartition bound value

Column Name	Data Type	Description
SUBPARTITION_NO	NUMBER	Subpartition number within the partition
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the subpartition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
COMPRESSION	VARCHAR(3)	Whether or not the table partition has been compressed - YES - NO
COMPRESS_FOR	VARCHAR(12)	Compression level of the table subpartition - QUERY LOW - QUERY HIGH - ARCHIVE LOW - ARCHIVE HIGH - NULL
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
NUM_ROWS	NUMBER	The number of rows within the table subpartition
LAST_ANALYZED	DATE	Date of the most recent analysis for the table subpartition

- See also

[ALL_TBL_SUBPARTITIONS](#)

[DBA_TAB_SUBPARTITIONS](#)

[DBA_TBL_SUBPARTITIONS](#)

3.2.80. ALL_TBL_COLS

Displays column information of all tables and views that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table or view
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
NUM_NULLS	NUMBER	(Not supported)
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)

Column Name	Data Type	Description
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column
HIDDEN_COLUMN	CHAR(3)	(Not supported)
SEGMENT_COLUMN_ID	VARCHAR(3)	(Not supported)
INTERNAL_COLUMN_ID	VARCHAR(3)	(Not supported)
QUALIFIED_COLUMN_NAME	VARCHAR(4000)	(Not supported)
OBJ_ID	NUMBER	ID of the object

- See also

[ALL_TAB_COLS](#)

[DBA_TAB_COLS](#)

[DBA_TBL_COLS](#)

[USER_TAB_COLS](#)

[USER_TBL_COLS](#)

3.2.81. ALL_TBL_COLUMNS

Displays column information of all tables and views that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table or view
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value

Column Name	Data Type	Description
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column
OBJ_ID	NUMBER	ID of the object

- See also

[ALL_TAB_COLUMNS](#)

[ALL_TBL_COLUMNS_WITH_DNO](#)

[DBA_TAB_COLUMNS](#)

[DBA_TBL_COLUMNS](#)

[USER_TAB_COLUMNS](#)

[USER_TBL_COLUMNS](#)

3.2.82. ALL_TBL_COLUMNS_WITH_DNO

Displays column information of all tables and views, which the current user can access, with data type number of the column.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table or view
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_TYPE_NO	NUMBER	Data type number of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column
OBJ_ID	NUMBER	ID of the object

- See also

[ALL_TAB_COLUMNS](#)

[ALL_TBL_COLUMNS](#)

[DBA_TAB_COLUMNS](#)

[DBA_TBL_COLUMNS](#)

[USER_TAB_COLUMNS](#)

[USER_TBL_COLUMNS](#)

3.2.83. ALL_TBL_COL_STATISTICS

Displays statistics and a histogram of columns by extracting them from ALL_TBL_COLUMNS.

- Columns

Column Name	Data Type	Description
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
NUM_DISTINCT	NUMBER	The number of distinct values
LOW_VALUE	VARCHAR(4000)	The lowest value in the column
HIGH_VALUE	VARCHAR(4000)	The highest value in the column
DENSITY	NUMBER	Density of the column
NUM_NULLS	NUMBER	The number of NULL values
NUM_BUCKETS	NUMBER	The number of buckets for the histogram
LAST_ANALYZED	DATE	Date of the most recent analysis for the column
SAMPLE_SIZE	NUMBER	Size of the sample used for analyzing statistics for the column
AVG_COL_LEN	NUMBER	Average length of the column (in bytes)
HISTOGRAM	VARCHAR(15)	Indicates the type of histogram

- See also

[ALL_TAB_COL_STATISTICS](#)

[DBA_TAB_COL_STATISTICS](#)

[DBA_TBL_COL_STATISTICS](#)

[USER_TAB_COL_STATISTICS](#)

[USER_TBL_COL_STATISTICS](#)

3.2.84. ALL_TBL_COMMENTS

Synonym for ALL_TAB_COMMENTS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
TABLE_TYPE	VARCHAR(9)	Type of the object
COMMENTS	VARCHAR(4000)	Comment on the object

- See also

[ALL_TAB_COMMENTS](#)

[DBA_TAB_COMMENTS](#)

[DBA_TBL_COMMENTS](#)

3.2.85. ALL_TBL_HISTOGRAMS

Displays histogram information of tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
ENDPOINT_NUMBER	NUMBER	History bucket number
ENDPOINT_VALUE	NUMBER	End point value of the current bucket

Column Name	Data Type	Description
ENDPOINT_ACTUAL_VALUE	VARCHAR(4000)	Actual string value of the end point value of the current bucket

- See also

[ALL_TAB_HISTOGRAMS](#)

[DBA_TAB_HISTOGRAMS](#)

[DBA_TBL_HISTOGRAMS](#)

[USER_TAB_HISTOGRAMS](#)

[USER_TBL_HISTOGRAMS](#)

3.2.86. ALL_TBL_PARTITIONS

Displays partition information of all tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
COMPOSITE	VARCHAR(3)	Whether or not the partition belongs to a composite-partitioned table - YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the table partition
SUBPARTITION_COUNT	NUMBER	The number of subpartitions which belong to the partition
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the table
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter

Column Name	Data Type	Description
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
COMPRESSION	VARCHAR(3)	Whether or not the table partition has been compressed - YES - NO
COMPRESS_FOR	VARCHAR(12)	Compression level of the partition - QUERY LOW - QUERY HIGH - ARCHIVE LOW - ARCHIVE HIGH - NULL
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
NUM_ROWS	NUMBER	The number of rows within the table partition
BLOCKS	NUMBER	The number of data blocks containing information about the table partition
LAST_ANALYZED	DATE	Date of the most recent analysis for the table partition
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO

- See also

[ALL_TAB_PARTITIONS](#)

[DBA_TAB_PARTITIONS](#)

[DBA_TBL_PARTITIONS](#)

[USER_TAB_PARTITIONS](#)

[USER_TBL_PARTITIONS](#)

3.2.87. ALL_TBL_PRIVS

Displays tables for which the current user or public user is granted object privileges.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with GRANT OPTION - YES - NO

- See also

[ALL_TAB_PRIVS](#)

[DBA_TAB_PRIVS](#)

[DBA_TBL_PRIVS](#)

[USER_TAB_PRIVS](#)

[USER_TBL_PRIVS](#)

3.2.88. ALL_TBL_PRIVS_MADE

Displays object privileges granted on tables for which the current user or public user is the object owner or grantor.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Name of the object owner
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO

- See also

[ALL_TAB_PRIVS_MADE](#)

[USER_TAB_PRIVS_MADE](#)

[USER_TBL_PRIVS_MADE](#)

3.2.89. ALL_TBL_PRIVS_RECD

Displays object privileges granted on tables for which the current user or public user is the object grantee.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Name of the object owner
TABLE_NAME	VARCHAR(128)	Name of the object

Column Name	Data Type	Description
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO

- See also

[ALL_TAB_PRIVS_RECD](#)

3.2.90. ALL_TBL_SUBPARTITIONS

Displays subpartitions of all tables that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
PARTITION_NAME	VARCHAR(128)	Name of the table partition
SUBPARTITION_NAME	VARCHAR(128)	Name of the table subpartition
BOUND	LONG	Subpartition bound value
SUBPARTITION_NO	NUMBER	Subpartition number within the partition
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the subpartition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent

Column Name	Data Type	Description
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
COMPRESSION	VARCHAR(3)	Whether or not the table partition has been compressed - YES - NO
COMPRESS_FOR	VARCHAR(12)	Compression level of the table subpartition - QUERY LOW - QUERY HIGH - ARCHIVE LOW - ARCHIVE HIGH - NULL
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
NUM_ROWS	NUMBER	The number of rows within the table subpartition
LAST_ANALYZED	DATE	Date of the most recent analysis for the table subpartition

- See also

[ALL_TAB_SUBPARTITIONS](#)

[DBA_TAB_SUBPARTITIONS](#)

[DBA_TBL_SUBPARTITIONS](#)

3.2.91. ALL_TRIGGERS

Displays all triggers that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the trigger
TRIGGER_NAME	VARCHAR(128)	Name of the trigger
TRIGGER_TYPE	VARCHAR(16)	When the trigger is enabled - BEFORE STATEMENT - BEFORE EACH ROW - AFTER STATEMENT - AFTER EACH ROW
TRIGGERING_EVENT	VARCHAR(52)	Event that activates the trigger
TABLE_OWNER	VARCHAR(128)	Owner of the table where the trigger is defined
TABLE_NAME	VARCHAR(128)	Name of the table where the trigger is defined
REFERENC ING_NAMES	VARCHAR(422)	Name to which the trigger refers to read OLD and NEW column values
WHEN_CLAUSE	LONG	Conditions that should be evaluated before the trigger is enabled
STATUS	VARCHAR(8)	Whether or not the trigger is enabled

- See also

[DBA_TRIGGERS](#)

[USER_TRIGGERS](#)

3.2.92. ALL_TRIGGER_COLS

Displays column information of all triggers that the current user can access and all triggers on tables that the current user can access.

- Columns

Column Name	Data Type	Description
TRIGGER_OWNER	VARCHAR(128)	Owner of the trigger
TRIGGER_NAME	VARCHAR(128)	Name of the trigger
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_LIST	VARCHAR(3)	Whether or not the column is used in UPDATE OF clause (Yes/No)
COLUMN_USAGE	VARCHAR(17)	Column usage in the trigger

- See also

[DBA_TRIGGER_COLS](#)

[USER_TRIGGER_COLS](#)

3.2.93. ALL_TYPES

Displays all types that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of this type
TYPE_NAME	VARCHAR(128)	Name of this type
TYPE_OID	RAW(16)	Object identifier (OID) of this type
TYPECODE	VARCHAR(10)	Typecode of this type
ATTRIBUTES	NUMBER	The number of attributes for this type
METHODS	NUMBER	The number of methods for this type
PREDEFINED	VARCHAR(3)	Indicates whether this type is predefined (Not supported)
INCOMPLETE	VARCHAR(3)	Indicates whether this type is incomplete (Not supported)

Column Name	Data Type	Description
FINAL	VARCHAR(3)	Indicates whether this type is final
INSTANTIABLE	VARCHAR(3)	Indicates whether this type is instantiable
SUPERTYPE_OWNER	VARCHAR(128)	Owner of this supertype
SUPERTYPE_NAME	VARCHAR(128)	Name of this supertype
LOCAL_ATTRIBUTES	VARCHAR(256)	The number of local attributes
LOCAL_METHODS	VARCHAR(256)	The number of the local methods
TYPEID	RAW(8)	TYPEID of this type

- See also

[DBA_TYPES](#)

[USER_TYPES](#)

3.2.94. ALL_TYPE_ATTRS

Displays all the attributes that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of this type
TYPE_NAME	VARCHAR(128)	Name of this type
ATTR_NAME	VARCHAR(128)	Name of this attribute
ATTR_TYPE_MOD	VARCHAR(7)	Modifier of this attribute type (not supported)
ATTR_TYPE_OWNER	VARCHAR(128)	Owner of this attribute type
ATTR_TYPE_NAME	VARCHAR(128)	Name of this attribute type
LENGTH	NUMBER	Length of this type (not supported)
PRECISION	NUMBER	Precision of this type
SCALE	NUMBER	Scale of this type

Column Name	Data Type	Description
CHARACTER_SET_NAME	VARCHAR(128)	Name of the Character set (not supported)
ATTR_NO	NUMBER	Attribute number
INHERITED	VARCHAR(3)	Indicates whether this is inherited

- See also

[DBA_TYPE_ATTRS](#)

[USER_TYPE_ATTRS](#)

3.2.95. ALL_TYPE_METHODS

Displays all the methods of this type that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of this type
TYPE_NAME	VARCHAR(128)	Name of this type
METHOD_NAME	VARCHAR(128)	Name of this method
METHOD_NO	NUMBER	Method number for this method (not supported)
METHOD_TYPE	VARCHAR(11)	Type of this method
PARAMETERS	NUMBER	The number of parameters
RESULTS	VARCHAR(3)	Indicates whether this method has results to return.
FINAL	VARCHAR(3)	Indicates whether this method is final. (not supported)
INSTANTIABLE	VARCHAR(3)	Indicates whether this method is instantiable. (not supported)
OVERRIDING	VARCHAR(3)	Indicates whether this method is overriding a supertype method. (not supported)
INHERITED	VARCHAR(3)	Indicates whether this is inherited from a supertype method. (not supported)

Column Name	Data Type	Description
STATIC	VARCHAR(3)	Indicates whether this method is static.
CONSTRUCTOR	VARCHAR(3)	Indicates whether this method is constructor.

- See also

[DBA_TYPE_METHODS](#)

[USER_TYPE_METHODS](#)

3.2.96. ALL_UPDATABLE_COLUMNS

Displays all join view columns that the current user can update.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
UPDATABLE	VARCHAR(3)	Whether or not the column is updatable - YES - NO
INSERTABLE	VARCHAR(3)	Whether or not the column is insertable - YES - NO
DELETABLE	VARCHAR(3)	Whether or not column is deletable - YES - NO

- See also

[DBA_UPDATABLE_COLUMNS](#)

3.2.97. ALL_USERS

Displays all users that the current user can view.

- Columns

Column Name	Data Type	Description
USERNAME	VARCHAR(128)	Name of the user
USER_ID	NUMBER	ID of the user
CREATED	DATE	Date that the user was created

- See also

[DBA_USERS](#)

[USER_USERS](#)

3.2.98. ALL_VIEWS

Displays all views that the current user can access.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the view
VIEW_NAME	VARCHAR(128)	Name of the view
TEXT	LONG	Definition of the view

- See also

[ALL_VIEWS_INTERNAL](#)

[DBA_VIEWS](#)

[USER_VIEWS](#)

3.2.99. ALL_VIEWS_INTERNAL

Displays all views that the current user can access. (including views that can be accessed by the roles)

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the view
VIEW_NAME	VARCHAR(128)	Name of the view
OBJ_ID	NUMBER	ID of the view

- See also

[ALL_VIEWS](#)

[DBA_VIEWS](#)

[USER_VIEWS](#)

3.2.100. DATABASE_PROPERTIES

Displays database properties.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(128)	Name of the property
VALUE	VARCHAR(80)	Value of the property
COMMENT_STR	VARCHAR(4000)	Description of the property

3.2.101. DBA_2PC_NEIGHBORS

Displays connection information for pending transactions.

- Columns

Column Name	Data Type	Description
LOCAL_TRAN_ID	VARCHAR(65532)	ID of the transaction

Column Name	Data Type	Description
IN_OUT	NUMBER	Connection status - IN: Incoming connection - OUT: Outgoing connection
DATABASE	VARCHAR(128)	Name of the database - IN: Client database name - OUT: Database link name
DBUSER_OWNER	VARCHAR(128)	Name of the owner - IN: Name of the user who accesses the database - OUT: Owner of the database link
INTERFACE	VARCHAR(1)	Type of the interface - C: Commit point site - N: Non-commit point site

3.2.102. DBA_2PC_PENDING

Displays pending transaction information.

- Columns

Column Name	Data Type	Description
LOCAL_TRAN_ID	VARCHAR(65532)	ID of the transaction
XID	VARCHAR(550)	XID
STATUS	VARCHAR(15)	Status of the XA transaction

3.2.103. DBA_AUDIT_TRAIL

Displays audit trails within the database.

- Columns

Column Name	Data Type	Description
OS_USERNAME	VARCHAR(128)	Operating system user name who was set to be audited
USERNAME	VARCHAR(128)	Name of the user who was set to be audited
USERHOST	VARCHAR(21)	Name of the host machine from which the client has connected
TIMESTAMP	VARCHAR(19)	Audit trail-created time
OWNER	VARCHAR(128)	Owner of the object associated with the audited action
OBJ_NAME	VARCHAR(128)	Name of the object associated with the audited action
SESSIONID	NUMBER	Session ID
SERIALNO	NUMBER	Sequence number of the session
ENTRYID	NUMBER	Sequence number for each audit trail in the session
STATEMENTID	NUMBER	ID of the executed statement
PRIV_USED	VARCHAR(80)	Name of the privilege used to execute the audited action
CLIENT_ID	VARCHAR(30)	Client identifier
INSTANCE_NUMBER	NUMBER	Instance number of RDBMS which performed the action
OS_PROCESS	VARCHAR(16)	Process ID of RDBMS
TRANSACTIONID	VARCHAR(65532)	Transaction ID that participated in the audited action
TSN	NUMBER	TSN of the audited action
SQL_TEXT	LONG	SQL of the audited action

- See also

[USER_AUDIT_TRAIL](#)

3.2.104. DBA_CATALOG

Displays all tables, views, synonyms, and sequences in the database.

- See also

[ALL_CATALOG](#)

[USER_CATALOG](#)

3.2.105. DBA_COLL_TYPES

Displays all the collection types.

- See also

[ALL_COLL_TYPES](#)

[USER_COLL_TYPES](#)

3.2.106. DBA_COL_COMMENTS

Displays comments on all columns in the database.

- See also

[ALL_COL_COMMENTS](#)

[USER_COL_COMMENTS](#)

3.2.107. DBA_COL_PRIVS

Displays object privileges of all columns of the database.

- See also

[ALL_COL_PRIVS](#)

[USER_COL_PRIVS](#)

3.2.108. DBA_CONSTRAINTS

Displays integrity constraints defined in the database table.

- See also

[ALL_CONSTRAINTS](#)

[USER_CONSTRAINTS](#)

3.2.109. DBA_CONS_COLUMNS

Displays the columns for which the database integrity constraint is specified.

- See also

[ALL_CONS_COLUMNS](#)

[USER_CONS_COLUMNS](#)

3.2.110. DBA_DATAFILES

Synonym for DBA_DATA_FILES.

- Columns

Column Name	Data Type	Description
FILE_NAME	VARCHAR(256)	Name of the data file
FILE_ID	NUMBER	ID of the data file
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace where the data file is contained.
BYTES	NUMBER	Size of the data file in bytes
BLOCKS	NUMBER	Size of the data file in blocks
STATUS	CHAR(9)	Status of the data file - UNUSED - ONLINE - OFFLINE - RESETLOG - RECOVERY
RELATIVE_FNO	NUMBER	Relative data file number
AUTOEXTENSIBLE	VARCHAR(3)	Auto extensible indicator - YES - NO
MAXBYTES	NUMBER	Maximum data file size in bytes

Column Name	Data Type	Description
MAXBLOCKS	NUMBER	Maximum data file size in blocks
INCREMENT_BY	NUMBER	Auto increment value

- See also

[DBA_DATA_FILES](#)

3.2.111. DBA_DATA_FILES

Displays data file information.

- Columns

Column Name	Data Type	Description
FILE_NAME	VARCHAR(256)	Name of the data file
FILE_ID	NUMBER	ID of the data file
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace where the data file is contained.
BYTES	NUMBER	Size of the data file in bytes
BLOCKS	NUMBER	Size of the data file in blocks
STATUS	CHAR(9)	Status of the data file - UNUSED - ONLINE - OFFLINE - RESETLOG - RECOVERY
RELATIVE_FNO	NUMBER	Relative data file number
AUTOEXTENSIBLE	VARCHAR(3)	Auto extensible indicator - YES - NO
MAXBYTES	NUMBER	Maximum data file size in bytes

Column Name	Data Type	Description
MAXBLOCKS	NUMBER	Maximum data file size in blocks
INCREMENT_BY	NUMBER	Auto increment value

- See also

[DBA_DATAFILES](#)

3.2.112. DBA_DB_LINKS

Displays information for all database links.

- See also

[ALL_DB_LINKS](#)

[USER_DB_LINKS](#)

3.2.113. DBA_DEPENDENCIES

Displays dependencies of all objects.

- See also

[ALL_DEPENDENCIES](#)

[USER_DEPENDENCIES](#)

3.2.114. DBA_DIRECTORIES

Displays all directories in the database.

- See also

[ALL_DIRECTORIES](#)

3.2.115. DBA_ENCRYPTED_COLUMNS

Displays information of all encrypted columns in the database. The columns are the same as those in ALL_ENCRYPTED_COLUMNS.

- See also

[ALL_ENCRYPTED_COLUMNS](#)

[USER_ENCRYPTED_COLUMNS](#)

3.2.116. DBA_ERRORS

Displays the recent errors on every view, procedure, function, package, package body, trigger, library, and java object in the database. The columns are the same as those in ALL_ERRORS.

- See also

[ALL_ERRORS](#)

[USER_ERRORS](#)

3.2.117. DBA_EXTENTS

Displays information of the extents contained in the segments of all the tablespaces in the database.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the segment containing the extent
SEGMENT_NAME	VARCHAR(128)	Name of the segment containing the extent
PARTITION_NAME	VARCHAR(128)	Partition name of the object (Null value for non-partitioned objects)
SEGMENT_TYPE	VARCHAR(18)	Type of the segment
TABLESPACE_NAME	VARCHAR(30)	Name of the tablespace containing the extent
EXTENT_ID	NUMBER	ID of the extent
FILE_ID	NUMBER	ID of the file containing the extent
BLOCK_ID	NUMBER	Starting block number of the extent
BYTES	NUMBER	Size of the extent in bytes
BLOCKS	NUMBER	Size of the extent in blocks

Column Name	Data Type	Description
RELATIVE_FNO	NUMBER	Relative file number of the extent

- See also

[USER_EXTENTS](#)

3.2.118. DBA_EXTERNAL_LOCATIONS

Displays all external table locations in the database.

- See also

[ALL_EXTERNAL_LOCATIONS](#)

[USER_EXTERNAL_LOCATIONS](#)

3.2.119. DBA_EXTERNAL_TABLES

Displays all external tables in the database.

- See also

[ALL_EXTERNAL_TABLES](#)

[USER_EXTERNAL_TABLES](#)

3.2.120. DBA_FREE_SPACE

Displays information of the extents that all tablespaces can use.

- Columns

Column Name	Data Type	Description
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace containing the extent
FILE_ID	NUMBER	ID of the file containing the extent
BLOCK_ID	NUMBER	Starting block number of the extent
BYTES	NUMBER	Size of the extent in bytes
BLOCKS	NUMBER	Size of the extent in blocks

Column Name	Data Type	Description
RELATIVE_FNO	NUMBER	Relative file number of the extent

- See also

[USER_FREE_SPACE](#)

3.2.121. DBA_HIST_ACTIVE_SESS_HISTORY

Displays history information on active sessions.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Snap ID
SAMPLE_ID	NUMBER	Sample ID
THREAD#	NUMBER	Thread#
SAMPLE_TIME	DATE	Sample Time
SESSION_ID	NUMBER	Session ID
SESS_SERIAL_NO	NUMBER	A serial number of a session
USER_NO	NUMBER	The user's ID
WAIT_EVENT	NUMBER	Type of the wait event which the session waits
TIME_WAITED	NUMBER	The amount of time waited for this event (msec)
SQL_ID	VARCHAR(13)	SQL identifier
SQL_CHILD_NUMBER	NUMBER	The number of this child physical plan
CURR_HASHVAL	NUMBER	SQL hash value
MODULE_NAME	VARCHAR(64)	Name of a module specified by dbms_application_info.set_module
ACTION_NAME	VARCHAR(64)	Name of an action specified by dbms_application_info.set_module/action

Column Name	Data Type	Description
CLIENT_INFO_NAME	VARCHAR(64)	Name of client_info specified by dbms_application_info.set_client_info
PROG_NAME	VARCHAR(30)	Client program name
SQL_EXEC_START	DATE	The time when the execution started.
SQL_EXEC_ID	NUMBER	Execution identifier. It is necessary to identify multiple simultaneous SQL executions. To identify a single SQL execution, three columns; SQL_ID, SQL_EXEC_START, and SQL_EXEC_ID must be defined. The three column values are used to match with corresponding rows in the V\$SQL_MONITOR.
SQL_PLAN_LINE_ID	NUMBER	Identifier of the plan operation
ID1	NUMBER	First Parameter
ID2	NUMBER	Second Parameter
WE_SEQ	NUMBER	Sequence# of the Wait Event
USGMT_ID	NUMBER	USGMT number at the time of sampling
SLOTNO	NUMBER	Slot number at the time of sampling
WRAPNO	NUMBER	Wrap number at the time of sampling
PORT	NUMBER	Client port number
DELTA_TIME	NUMBER	Time interval (in seconds) since the last time this session was sampled or created.
DELTA_PHY_READ_BKLS	NUMBER	The number of blocks read from disk over the last DELTA_TIME seconds
DELTA_PHY_WRITE_BKLS	NUMBER	The number of blocks written to disk over the last DELTA_TIME seconds
DELTA_LOG_READ_BKLS	NUMBER	The number of blocks read over the last DELTA_TIME seconds
PGA_SIZE	NUMBER	The amount of PGA memory consumed by this session
WAIT_OBJ_ID	NUMBER	ID of the object which the session waits

Column Name	Data Type	Description
WAIT_FILE_NO	NUMBER	Number of the file which the session waits
WAIT_BLOCK_NO	NUMBER	Number of the block which the session waits
WAIT_ROW_NO	NUMBER	Number of the row which the session waits
WAIT_EVENT_NAME	VARCHAR(40)	Name of wait_event

3.2.122. DBA_HIST_FILESTAT

Displays historical statistics of data file and temp file I/O. This view includes snapshots of V\$ALL_FILESTAT.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
FILE#	NUMBER	File number
PHYRDS	NUMBER	The number of read operations performed
PHYWRTS	NUMBER	The number of write operations performed
READTIM	NUMBER	Time spent on read operations (msec)
WRITETIM	NUMBER	Time spent on write operations (msec)
PHYBLKRD	NUMBER	The number of blocks read
PHYBLKWRT	NUMBER	The number of blocks written

3.2.123. DBA_HIST_LATCH

Displays the historical information on spinlocks. This view includes snapshots of V\$LATCH.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot

Column Name	Data Type	Description
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
LATCH#	NUMBER	Spinlock number
GETS	NUMBER	The number of times a spinlock was acquired
MISSES	NUMBER	The number of times the requester had to wait for a spinlock
SLEEPS	NUMBER	The number of times the requester was put to sleep while waiting for a spinlock
IMMEDIATE_GETS	NUMBER	The number of times a trylock was acquired
IMMEDIATE_MISSES	NUMBER	The number of times the requester failed to acquire a trylock
SPIN_GETS	NUMBER	The number of times the requester failed to acquire a spinlock but succeeded in gaining a spin
WAIT_TIME	NUMBER	The total sleep time of spinlock
SLEEPS_CNT	NUMBER	The number of actual sleep count while waiting for a spinlock

3.2.124. DBA_HIST_LIBRARYCACHE

Displays information of PP cache and DD cache. This view includes snapshots of V\$LIBRARYCACHE.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
NAMESPACE	VARCHAR(16)	Name of the table
GETS	NUMBER	Cache total access count
GETHITS	NUMBER	Cache hit count

3.2.125. DBA_HIST_OSSTAT

Displays historical information on various OS statistics. This view includes snapshots of V\$OSSTAT2.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
STAT_ID	NUMBER	Identifier of OS statistics
VALUE	NUMBER	OS statistics value

3.2.126. DBA_HIST_PGASTAT

Displays the historical statistics of PGA. This view includes the snapshot of V\$PGASTAT.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
NAME	VARCHAR(64)	Name of a PGA statistics
VALUE	NUMBER	Value of the PGA statistics
SNAP_TIME	DATE	Snapshot time of PGA statistics

3.2.127. DBA_HIST_PROCESS_MEM_SUMMARY

Displays historical information on PGA memory usage. This view gets information from V\$PROCESS.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot.
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot

Column Name	Data Type	Description
NUM_PROCESSES	NUMBER	Number of processes
NON_ZERO_USES	NUMBER	Number of processes with non-zero memory usage
USED_TOTAL	NUMBER	Total size of local memory occupied
USED_AVG	NUMBER	Average size of local memory occupied
USED_STDDEV	NUMBER	Standard deviation of local memory occupied
USED_MAX	NUMBER	Maximum size of local memory occupied

3.2.128. DBA_HIST_SEG_STAT

Displays historical information of segment-level statistics. This view includes snapshots of V\$SEGMENT_STATISTICS.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
OBJ_ID	NUMBER	Object ID
STATISTICS#	NUMBER	Segment statistics type
STATISTICS_NAME	VARCHAR(64)	Name of the segment statistics
VALUE	NUMBER	Value of the segment statistics

3.2.129. DBA_HIST_SGASTAT

Displays the historical information on the shared pool for a database. This view includes snapshots of V\$SGASTAT.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot

Column Name	Data Type	Description
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
NAME	VARCHAR(40)	Purpose for which shared pool is used
SIZE	NUMBER	Usage of shared pool

3.2.130. DBA_HIST_SNAPSHOT

Displays information about TPR snapshots.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
BEGIN_INTERVAL_TIME	DATE	Start time of a snapshot interval
END_INTERVAL_TIME	DATE	End time of a snapshot interval

3.2.131. DBA_HIST_SQLSTAT

Displays historical information for SQL statistics. This view displays the priority of items of specific criteria.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
SQL_HASH_VALUE	NUMBER	Hash value of the SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
LAST_ACTIVE_TIME	DATE	Last time that statistics were collected
PARSE_CALLS	NUMBER	The number of parsing requests

Column Name	Data Type	Description
FETCHES	NUMBER	The number of fetching times
EXECUTIONS	NUMBER	The number of times for executing an SQL statement
BUFFER_GETS	NUMBER	Total number of buffers read in Consistent-Read mode
ROWS_PROCESSED	NUMBER	Total number of processed rows
ELAPSED_TIME	NUMBER	Total execution time (in microseconds)
DISK_READ_TIME	NUMBER	Total disk read time
TEMP_SGMT_READ_TIME	NUMBER	Total temp segment read time
TEMP_SGMT_WRITE_TIME	NUMBER	Total temp segment write time

3.2.132. DBA_HIST_SQLTEXT

Displays historical information about texts of SQL statements.

- Columns

Column Name	Data Type	Description
SQL_HASH_VALUE	NUMBER	Hash value of the SQL statement
SQL_TEXT	VARCHAR(64)	Text of an SQL statement split into 64-byte texts
COMMAND_TYPE	NUMBER	Number code of SQL statement type 1 - SELECT 2 - INSERT 3 - UPDATE 4 - DELETE 5 - MERGE 6 - CALL

3.2.133. DBA_HIST_SQL_PLAN

Displays historical information about SQL execution plans. This view includes snapshots of V\$SQL_PLAN.

- Columns

Column Name	Data Type	Description
SQL_HASH_VALUE	NUMBER	Hash value of the SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan

Column Name	Data Type	Description
ID	NUMBER	Number given to each job of the physical plan
OPERATION	VARCHAR(128)	Name of operation job
OBJECT_ID	NUMBER	Identifier of object accessed by the job
OBJECT_OWNER	VARCHAR(128)	Name of user to whom the object belongs
OBJECT_NAME	VARCHAR(128)	Object name
OBJECT_TYPE	VARCHAR(20)	Object type
PARENT_ID	NUMBER	ID of a job to get the output of the current job of the physical plan as input
DEPTH	NUMBER	Tree level of the physical plan
POSITION	NUMBER	Positions between all the jobs with the same PARENT_ID
COST	NUMBER	Job cost estimated by query optimizer
CARDINALITY	NUMBER	The number of output results estimated by query optimizer
PARTITION_START	VARCHAR(38)	In a partitioned table, the start partition for access
PARTITION_STOP	VARCHAR(38)	In a partitioned table, the end partition for access
OTHER	VARCHAR(4000)	Other information specific to the execution step that may be useful -Database link information -Dynamic sampling block count for table scans or index scans
CPU_COST	NUMBER	CPU cost of the operation as estimated by query optimizer
IO_COST	NUMBER	I/O cost of the operation as estimated by query optimizer
ACCESS_PREDICATES	VARCHAR(4000)	Predicate information to access indexes or to handle joins
FILTER_PREDICATES	VARCHAR(4000)	Predicate information to handle filters

3.2.134. DBA_HIST_SQL_WORKAREA_HSTGRM

Displays historical information about work areas used by SQL cursors. This view includes snapshots of V\$SQL_WORKAREA_HISTOGRAM.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
LOW_OPTIMAL_SIZE	NUMBER	The lower bounding value (in bytes) for the optimal size
HIGH_OPTIMAL_SIZE	NUMBER	The higher bounding value (in bytes) for the optimal size
OPTIMAL_EXECUTIONS	NUMBER	The number of work areas that were executed in optimal mode within each LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE bound
ONEPASS_EXECUTIONS	NUMBER	The number of work areas that were executed in onepass mode within each LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE bound
MULTIPASSES_EXECUTIONS	NUMBER	The number of work areas that were executed in multi pass mode within each LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE bound
TOTAL_EXECUTIONS	NUMBER	The total number of work areas that were excuted within each LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE bound

3.2.135. DBA_HIST_SYSMETRIC_SUMMARY

Displays a history of statistical summary of all metric values in the System Metrics Long Duration group.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
THREAD#	NUMBER	Thread#
BEGIN_TIME	DATE	Begin Time of the Sample

Column Name	Data Type	Description
END_TIME	DATE	End Time of the Sample @coulum GROUP_ID NUMBER Group ID
METRIC_ID	NUMBER	Metric ID
METRIC_NAME	VARCHAR(64)	Metric Name
METRIC_UNIT	VARCHAR(64)	Descriptions of the Metric Unit
MINVAL	NUMBER	Minimum value observed
MINVAL	NUMBER	Maximum value observed
AVERAGE	NUMBER	Average over the period
STD	NUMBER	One standard deviation

3.2.136. DBA_HIST_SYSTEM_EVENT

Displays historical information of events performing in the system. This view includes snapshots of V\$SYSTEM_EVENT.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
EVENT_NUMBER	NUMBER	Event number
TOTAL_WAITS	NUMBER	Total number of event calls
TIME_WAITED	NUMBER	The amount of time waited for this event (msec)
AVERAGE_WAIT	NUMBER	The average amount of time waited for this event (msec)
MAX_WAIT	NUMBER	The maximum amount of time waited for this event (msec)
TOTAL_TIMEOUTS	NUMBER	The number of times that a time-out occurred in an event

3.2.137. DBA_HIST_UNDOSTAT

Displays historical statistics of undo storage space. This view includes snapshots of V\$UNDOSTAT.

- Columns

Column Name	Data Type	Description
END_TIME	DATE	End time of statistics
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot
SNAP_ID	NUMBER	Unique ID of a snapshot
UNDO_TSNO	NUMBER	Tablespace number
UNDOBLKS	NUMBER	The number of used undo blocks
TXCOUNT	NUMBER	Total number of executed transactions
MAXCONCURRENCY	NUMBER	The largest number of concurrently executed transactions
SNAP_TOO_OLD_CNT	NUMBER	The number of errors caused by failing to read old data
NOSPACEERRCNT	NUMBER	The number of errors caused by lack of undo storage space
ACTIVEBLKS	NUMBER	The number of blocks in use
UNEXPIREDBLKS	NUMBER	The number of non-reusable blocks
EXPIREDBLKS	NUMBER	The number of reusable blocks

3.2.138. DBA_HIST_WAITSTAT

Displays the statistical history of block wait events for each block type and class. This view includes snapshots of V\$WAITSTAT.

- Columns

Column Name	Data Type	Description
SNAP_ID	NUMBER	Unique ID of a snapshot
INSTANCE_NUMBER	NUMBER	Instance number of the snapshot

Column Name	Data Type	Description
CLASS	VARCHAR(20)	Block class (Block type)
WAIT_COUNT	NUMBER	The number of times waiting for the block class
TIME	NUMBER	Total time spent waiting for the block class

3.2.139. DBA_IDX_COLUMNS

Displays index columns of all tables in the database.

- See also

[ALL_IDX_COLUMNS](#)

[ALL_IND_COLUMNS](#)

[DBA_IND_COLUMNS](#)

[USER_IDX_COLUMNS](#)

[USER_IND_COLUMNS](#)

3.2.140. DBA_IDX_EXPRESSIONS

Displays expressions on the index columns of all tables in the database.

- See also

[ALL_IDX_EXPRESSIONS](#)

[ALL_IND_EXPRESSIONS](#)

[DBA_IND_EXPRESSIONS](#)

[USER_IDX_EXPRESSIONS](#)

[USER_IND_EXPRESSIONS](#)

3.2.141. DBA_IDX_PARTITIONS

Displays all index partitions in the database.

- See also

[ALL_IDX_PARTITIONS](#)

[ALL_IND_PARTITIONS](#)

[DBA_IND_PARTITIONS](#)

[USER_IDX_PARTITIONS](#)

[USER_IND_PARTITIONS](#)

3.2.142. DBA_IDX_SUBPARTITIONS

Displays subpartitions of all indexes in the database.

- See also

[ALL_IDX_SUBPARTITIONS](#)

[ALL_IND_SUBPARTITIONS](#)

[DBA_IND_SUBPARTITIONS](#)

3.2.143. DBA_INDEXES

Displays indexes of all tables in the database.

- See also

[ALL_INDEXES](#)

[USER_INDEXES](#)

3.2.144. DBA_IND_COLUMNS

Synonym for DBA_IDX_COLUMNS.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table

Column Name	Data Type	Description
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_LENGTH	NUMBER	Length of the column within the index
DESCEND	VARCHAR(4)	Sorting order in columns - DESC - ASC

- See also

[ALL_IDX_COLUMNS](#)

[ALL_IND_COLUMNS](#)

[DBA_IDX_COLUMNS](#)

[USER_IDX_COLUMNS](#)

[USER_IND_COLUMNS](#)

3.2.145. DBA_IND_EXPRESSIONS

Synonym for DBA_IDX_EXPRESSIONS.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_EXPRESSION	LONG	Expression of the column within the index

- See also

[ALL_IDX_EXPRESSIONS](#)

[ALL_IND_EXPRESSIONS](#)

[DBA_IDX_EXPRESSIONS](#)

[USER_IDX_EXPRESSIONS](#)

[USER_IND_EXPRESSIONS](#)

3.2.146. DBA_IND_PARTITIONS

Synonym for DBA_IDX_PARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
INDEX_NAME	VARCHAR(128)	Name of the index
COMPOSITE	VARCHAR(3)	Whether or not partition belongs to a composite-partitioned index - YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the partition
SUBPARTITION_COUNT	NUMBER	The number of the subpartitions that belong to the partition
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the index
BLEVEL	NUMBER	Level of B-tree index (The level is 0 for a B-tree with only a root node)
LEAF_BLOCKS	NUMBER	The number of leaf blocks in the index
DISTINCT_KEYS	NUMBER	The number of distinct keys in the index
CLUSTERING_FACTOR	NUMBER	The clustering factor of the index
STATUS	VARCHAR(8)	Current status of the index

Column Name	Data Type	Description
		- USABLE - UNUSABLE
NUM_ROWS	NUMBER	The number of rows in the index
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
MAX_TRANS	NUMBER	Value of the MAX_TRANS parameter
INITIAL_EXTENT	NUMBER	Value of the INITIAL_EXTENT parameter
MIN_EXTENT	NUMBER	Value of the MIN_EXTENT parameter
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
LAST_ANALYZED	DATE	Date of the most recent analysis for the index partition

- See also

[ALL_IDX_PARTITIONS](#)

[ALL_IND_PARTITIONS](#)

[DBA_IDX_PARTITIONS](#)

[USER_IDX_PARTITIONS](#)

[USER_IND_PARTITIONS](#)

3.2.147. DBA_IND_SUBPARTITIONS

Synonym for DBA_IDX_SUBPARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
INDEX_NAME	VARCHAR(128)	Name of the index
PARTITION_NAME	VARCHAR(128)	Name of the index partition
SUBPARTITION_NAME	VARCHAR(128)	Name of the index subpartition
BOUND	LONG	Subpartition bound value
SUBPARTITION_NO	NUMBER	Subpartition number
STATUS	VARCHAR(8)	Current status of the index - USABLE - UNUSABLE
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the subpartition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO

Column Name	Data Type	Description
NUM_ROWS	NUMBER	The number of rows in the index subpartition
LAST_ANALYZED	DATE	Date of the most recent analysis for the subpartition

- See also

[ALL_IDX_SUBPARTITIONS](#)

[ALL_IND_SUBPARTITIONS](#)

[DBA_IDX_SUBPARTITIONS](#)

3.2.148. DBA_JAVA_ARGUMENTS

Displays all parameters in the database.

- See also

[ALL_JAVA_ARGUMENTS](#)

[USER_JAVA_ARGUMENTS](#)

3.2.149. DBA_JAVA_CLASSES

Displays all classes in the database.

- See also

[ALL_JAVA_CLASSES](#)

[USER_JAVA_CLASSES](#)

3.2.150. DBA_JAVA_FIELDS

Displays all fields in the database.

- See also

[ALL_JAVA_FIELDS](#)

[USER_JAVA_FIELDS](#)

3.2.151. DBA_JAVA_METHODS

Displays all methods in the database.

- See also

[ALL_JAVA_METHODS](#)

[USER_JAVA_METHODS](#)

3.2.152. DBA_JOBS

Displays all jobs in the database.

- See also

[ALL_JOBS](#)

[USER_JOBS](#)

3.2.153. DBA_LIBRARIES

Displays all libraries in the database.

- See also

[ALL_LIBRARIES](#)

[USER_LIBRARIES](#)

3.2.154. DBA_LOBS

Displays LOBs which belong to all tables in the database.

- See also

[ALL_LOBS](#)

[USER_LOBS](#)

3.2.155. DBA_LOB_PARTITIONS

Displays all LOB partitions in the database.

- See also

[ALL_LOB_PARTITIONS](#)

[USER_LOB_PARTITIONS](#)

3.2.156. DBA_LOB_SUBPARTITIONS

Displays all LOB subpartitions in the database.

- See also

[ALL_LOB_SUBPARTITIONS](#)

[USER_LOB_SUBPARTITIONS](#)

3.2.157. DBA_LOG_GROUPS

Displays the log group definitions on all tables in the database.

- See also

[ALL_LOG_GROUPS](#)

[USER_LOG_GROUPS](#)

3.2.158. DBA_LOG_GROUP_COLUMNS

Displays all columns in the database that are specified in log groups.

- See also

[ALL_LOG_GROUP_COLUMNS](#)

[USER_LOG_GROUP_COLUMNS](#)

3.2.159. DBA_METHOD_PARAMS

Displays the method parameters of this type.

- See also

[ALL_METHOD_PARAMS](#)

[USER_METHOD_PARAMS](#)

3.2.160. DBA_METHOD_RESULTS

Displays the result of the method of this type.

- See also

[ALL_METHOD_RESULTS](#)

[USER_METHOD_RESULTS](#)

3.2.161. DBA_MVIEWS

Displays all materialized views in the database. The columns are the same as those in ALL_MVIEWS.

- See also

[ALL_MVIEWS](#)

[USER_MVIEWS](#)

3.2.162. DBA_MVIEW_COMMENTS

Displays comments on all materialized views in the database. The columns are the same as those in ALL_MVIEW_COMMENTS.

- See also

[ALL_MVIEW_COMMENTS](#)

[USER_MVIEW_COMMENTS](#)

3.2.163. DBA_MVIEW_LOGS

Displays all materialized view logs in the database. The columns are the same as those in ALL_MVIEW_LOGS.

- See also

[ALL_MVIEW_LOGS](#)

[USER_MVIEW_LOGS](#)

3.2.164. DBA_OBJECTS

Displays all objects in the database.

- See also

[ALL_OBJECTS](#)

[USER_OBJECTS](#)

3.2.165. DBA_OBJ_AUDIT_OPTS

Displays objects being audited in the database.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
OBJECT_NAME	VARCHAR(128)	Name of the object
OBJECT_TYPE	VARCHAR(9)	Type of the object - TABLE - VIEW - SEQUENCE - PROCEDURE - DIRECTORY - JAVA
ALT	VARCHAR(5)	ALTER auditing option for success or failure
DEL	VARCHAR(5)	DELETE auditing option for success or failure
IND	VARCHAR(5)	INDEX auditing option for success or failure
INS	VARCHAR(5)	INSERT auditing option for success or failure
LOC	VARCHAR(5)	LOCK auditing option for success or failure
SEL	VARCHAR(5)	SELECT auditing option for success or failure
UPD	VARCHAR(5)	UPDATE auditing option for success or failure

Column Name	Data Type	Description
REF	VARCHAR(5)	REFERENCE auditing option for success or failure
EXE	VARCHAR(5)	EXECUTE auditing option for success or failure
REA	VARCHAR(5)	READ auditing option for success or failure
WRI	VARCHAR(5)	WRITE auditing option for success or failure

- See also

[USER_OBJ_AUDIT_OPTS](#)

3.2.166. DBA_PACKAGE_MEMBER_TYPES

Displays types of the package.

- See also

[ALL_PACKAGE_MEMBER_TYPES](#)

[USER_PACKAGE_MEMBER_TYPES](#)

3.2.167. DBA_PART_INDEXES

Displays partitioning information for the partitioned indexes in the database.

- See also

[ALL_PART_INDEXES](#)

[USER_PART_INDEXES](#)

3.2.168. DBA_PART_KEY_COLUMNS

Displays partitioning key columns for all partitioned tables or indexes in the database.

- See also

[ALL_PART_KEY_COLUMNS](#)

[USER_PART_KEY_COLUMNS](#)

3.2.169. DBA_PART_LOBS

Displays LOBs which belong to the partitioned tables in the database.

- See also

[ALL_PART_LOBS](#)

[USER_PART_LOBS](#)

3.2.170. DBA_PART_TABLES

Displays partitioning information of the partitioned tables in the database.

- See also

[ALL_PART_TABLES](#)

[USER_PART_TABLES](#)

3.2.171. DBA_PRIV_AUDIT_OPTS

Displays users being audited in the database.

- Columns

Column Name	Data Type	Description
USER_NAME	VARCHAR(128)	Name of the user being audited
PROXY_NAME	VARCHAR(128)	PROXY name of the user being audited
PRIVILEGE	VARCHAR(40)	Name of the system privilege being audited
SUCCESS	VARCHAR(10)	Auditing option at success
FAILURE	VARCHAR(10)	Auditing option at failure

3.2.172. DBA_PROCEDURES

Displays all procedures in the database.

- See also

[ALL_PROCEDURES](#)

3.2.173. DBA_PROFILES

Describes all profiles in the database.

- Columns

Column Name	Data Type	Description
PROFILE	VARCHAR(255)	Name of the profile
RESOURCE_NAME	VARCHAR(255)	Name of the resource
RESOURCE_TYPE	VARCHAR(8)	Indicates whether the resource profile is a KERNEL or a PASSWORD parameter
LIMIT	VARCHAR(256)	Limit placed on this resource for this profile

3.2.174. DBA_QUEUES

Describes all queues in the database.

- See also

[ALL_QUEUES](#)

[USER_QUEUES](#)

3.2.175. DBA_QUEUE_SUBSCRIBERS

Shows the list of subscribers on all queues in the database.

- See also

[ALL_QUEUE_SUBSCRIBERS](#)

[USER_QUEUE_SUBSCRIBERS](#)

3.2.176. DBA_QUEUE_TABLES

Describes the queues in all queue tables in the database.

- See also

[ALL_QUEUE_TABLES](#)

[USER_QUEUE_TABLES](#)

3.2.177. DBA_RECYCLEBIN

Displays information of all temporarily deleted objects in the database. The columns are the same as those in ALL_RECYCLEBIN.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
OBJECT_NAME	VARCHAR(128)	Current name of the object
ORIGINAL_NAME	VARCHAR(128)	Original name of the object
TYPE	VARCHAR(7)	Type of the object - Table - Index - Trigger
TS_NAME	VARCHAR(128)	Name of the tablespace containing the object
CREATETIME	VARCHAR(19)	Timestamp for the object creation
DROPTIME	VARCHAR(19)	Timestamp for the object deletion
DROPTSN	NUMBER	TSN of the transaction which dropped the object
BASE_OBJECT	VARCHAR(256)	Object ID of the base object
SPACE	VARCHAR(0)	Number of blocks used by the object

- See also

[ALL_RECYCLEBIN](#)

[USER_RECYCLEBIN](#)

3.2.178. DBA_REDEFINITION_OBJECTS

Displays all objects in database which are being redefined online.

- Columns

Column Name	Data Type	Description
OBJECT_TYPE	VARCHAR(5)	Type of the object. (Currently, only 'TABLE' is available)
OBJECT_OWNER	VARCHAR(128)	Owner of the object.
OBJECT_NAME	VARCHAR(128)	Name of the object.
BASE_TABLE_OWNER	VARCHAR(128)	Owner of the base table of the object.
BASE_TABLE_NAME	VARCHAR(128)	Name of the base table of the object.
INTERIM_OBJECT_OWNER	VARCHAR(128)	Owner of the intermediate table of the object.
INTERIM_OBJECT_NAME	VARCHAR(128)	Name of the intermediate table of the object.

3.2.179. DBA_ROLES

Displays all roles in the database.

- Columns

Column Name	Data Type	Description
ROLE	VARCHAR(128)	Name of the role
PASSWORD_REQUIRED	VARCHAR(3)	Whether a password is required or not

3.2.180. DBA_ROLE_PRIVS

Displays roles granted to the users in the database.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user or role which was granted the role

Column Name	Data Type	Description
GRANTED_ROLE	VARCHAR(128)	Granted role
ADMIN_OPTION	VARCHAR(3)	Whether or not the role was assigned with ADMIN OPTION - YES - NO - ERR
DEFAULT_ROLE	VARCHAR(3)	Whether the role is set to default role for the user - YES - NO - ERR

- See also

[USER_ROLE_PRIVS](#)

3.2.181. DBA_ROLLBACK_SEGS

Synonym for DBA_UNDO_SGMTS.

- Columns

Column Name	Data Type	Description
SEGMENT_ID	NUMBER	ID of the segment
TABLESPACE_NAME	VARCHAR(128)	Name of the undo tablespace
FILE_ID	NUMBER	ID of the file containing the segment header
BLOCK_ID	NUMBER	ID of the block containing the segment header
STATUS	VARCHAR(15)	Status of the segment - ONLINE - OFFLINE - OFFLINE PENDING

Column Name	Data Type	Description
		- DROPPED (Never reused)
RELATIVE_FNO	NUMBER	Relative file number of the segment header

- See also

[DBA_UNDO_SGMTS](#)

3.2.182. DBA_RSRC_AUDIT

Displays change history of resource plans.

- Columns

Column Name	Data Type	Description
OLD_PLAN	VARCHAR2(30)	Name of old plan
NEW_PLAN	VARCHAR2(30)	Name of new plan
SWITCH_DATE	VARCHAR2(60)	Switch date of plan
SWITCH_TIME	VARCHAR2(60)	Switch time of plan

3.2.183. DBA_RSRC_CONSUMER_GROUPS

Displays all resource consumer groups in database.

- Columns

Column Name	Data Type	Description
CONSUMER_GROUP	VARCHAR2(30)	Name of the consumer group
COMMENTS	VARCHAR2(240)	Comments of the consumer group
ATTRIBUTE	VARCHAR(30)	Attributes of the consumer group
VALUE	VARCHAR(30)	Value of the consumer group

3.2.184. DBA_RSRC_PLANS

Displays all resource plans in database.

- Columns

Column Name	Data Type	Description
PLAN	VARCHAR2(30)	Name of the resource plan
COMMENTS	VARCHAR2(240)	Comments of the resource plan
IS_ACTIVE_PLAN	CHAR(1)	Activeness of the resource plan

3.2.185. DBA_RSRC_PLAN_DIRECTIVES

Displays all resource plan directives in the database.

- Columns

Column Name	Data Type	Description
PLAN	VARCHAR2(30)	Name of the resource plan directives
GROUP_OR_SUB PLAN	VARCHAR2(30)	Name of the consumer group or subplan
COMMENTS	VARCHAR2(240)	Comments of the resource plan directives
MGMT_P1	NUMBER	Parameter for the resource allocation method

3.2.186. DBA_SCHEDULER_CHAINS

Displays all scheduler chains in the database.

- See also

[ALL_SCHEDULER_CHAINS](#)

[USER_SCHEDULER_CHAINS](#)

3.2.187. DBA_SCHEDULER_JOBS

Displays all scheduler jobs in the database.

- See also

[ALL_SCHEDULER_JOBS](#)

[USER_SCHEDULER_JOBS](#)

3.2.188. DBA_SCHEDULER_PROGRAMS

Displays all scheduler programs in the database.

- See also

[ALL_SCHEDULER_PROGRAMS](#)

[USER_SCHEDULER_PROGRAMS](#)

3.2.189. DBA_SCHEDULER_RULES

Displays all scheduler rules in the database.

- See also

[ALL_SCHEDULER_RULES](#)

[USER_SCHEDULER_RULES](#)

3.2.190. DBA_SCHEDULER_RULE_CTX

Displays all scheduler rule ctx in the database.

- See also

[ALL_SCHEDULER_RULE_CTX](#)

[USER_SCHEDULER_RULE_CTX](#)

3.2.191. DBA_SCHEDULER_RUNNING_JOBS

Displays all scheduler running jobs in the database.

- See also

[ALL_SCHEDULER_RUNNING_JOBS](#)

[USER_SCHEDULER_RUNNING_JOBS](#)

3.2.192. DBA_SCHEDULER_STEPS

Displays all scheduler steps in the database.

- See also

[ALL_SCHEDULER_STEPS](#)

[USER_SCHEDULER_STEPS](#)

3.2.193. DBA_SCHEDULER_STEP_CTX

Displays all scheduler step context in the database.

- See also

[ALL_SCHEDULER_STEP_CTX](#)

[USER_SCHEDULER_STEP_CTX](#)

3.2.194. DBA_SEGMENTS

Displays all segments in the database.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the segment
SEGMENT_NAME	VARCHAR(128)	Name of the segment
PARTITION_NAME	VARCHAR(128)	Partition number of the object (Set to NULL for non-partitioned objects)
SEGMENT_TYPE	VARCHAR(18)	Type of the segment - TABLE - TABLE PARTITION - TABLE SUBPARTITION - LOB - INDEX - INDEX PARTITION

Column Name	Data Type	Description
		- INDEX SUBPARTITION - LOB - LOB PARTITION - LOB SUBPARTITION - UNDO
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace containing the segment
HEADER_FILE	NUMBER	ID of the file containing the segment header
HEADER_BLOCK	NUMBER	ID of the block containing the segment header
BLOCKS	NUMBER	Size of the segment in blocks
EXTENTS	NUMBER	Size of the segment in extents
RELATIVE_FNO	NUMBER	Relative file number of the segment header
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
MAX_EXTENTS	NUMBER	Maximum number of extents that the segment can use
BYTES	NUMBER	Size of segment in bytes
INITIAL_EXTENT	NUMBER	Size in bytes requested for the initial extent of the segment
NEXT_EXTENT	NUMBER	Size in bytes of the next extent to be allocated to the segment

- See also

[ALL_SEGMENTS](#)

[USER_SEGMENTS](#)

3.2.195. DBA_SEQUENCES

Displays all sequences in the database.

- See also

[ALL_SEQUENCES](#)

[USER_SEQUENCES](#)

3.2.196. DBA_SOURCE

Displays source texts of the stored objects in the database such as procedures, functions, package bodies, or triggers.

- See also

[ALL_SOURCE](#)

[USER_SOURCE](#)

3.2.197. DBA_SUBPART_KEY_COLUMNS

Displays subpartitioning key columns of the partitioned tables or indexes in the database.

- See also

[ALL_SUBPART_KEY_COLUMNS](#)

[USER_SUBPART_KEY_COLUMNS](#)

3.2.198. DBA_SYNONYMS

Displays synonyms in the database.

- See also

[ALL_SYNONYMS](#)

[USER_SYNONYMS](#)

3.2.199. DBA_SYS_PRIVS

Displays system privileges granted to users and roles in the database.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
PRIVILEGE	VARCHAR(40)	Name of the privilege
ADMIN_OPTION	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO - ERR

- See also

[USER_SYS_PRIVS](#)

3.2.200. DBA_TABLES

Displays all tables in the database.

- See also

[ALL_TABLES](#)

[USER_TABLES](#)

3.2.201. DBA_TABLESPACES

Displays all tablespaces in the database.

- Columns

Column Name	Data Type	Description
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace that contains the table
TS_ID	NUMBER	ID of the tablespace
DATAFILE_COUNT	NUMBER	The number of data files
BLOCK_SIZE	NUMBER	Size of the tablespace block

Column Name	Data Type	Description
NEXT_EXTENT	NUMBER	Size of the next extent
STATUS	VARCHAR(9)	Current status of the tablespace - ONLINE - OFFLINE
CONTENTS	VARCHAR(9)	Contents of the tablespace - TEMPORARY - PERMANENT - UNDO
LOGGING	VARCHAR(9)	Whether logging is enabled or not - YES - NO
FORCE_LOGGING	VARCHAR(3)	Whether force logging is enabled or not - YES - NO
ALLOCATION_TYPE	VARCHAR(7)	Type of extent allocation in effect for the tablespace: - SYSTEM - UNIFORM
ENCRYPTED	VARCHAR(3)	Whether tablespace encryption is enabled or not - YES - NO
INITIAL_EXTENT	NUMBER	Default initial extent size
MIN_EXTENTS	NUMBER	Default minimum number of extents
MAX_EXTENTS	NUMBER	Default maximum number of extents
EXTENT_MANAGEMENT	VARCHAR(5)	Type of extent management - LOCAL

Column Name	Data Type	Description
SEGMENT_SPACE_MANAGEMENT	VARCHAR(4)	Type of segment space management - AUTO

- See also

[USER_TABLESPACES](#)

3.2.202. DBA_TAB_COLS

Synonym for DBA_TBL_COLS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table or view
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
NUM_NULLS	NUMBER	(Not supported)
CHAR_USED	VARCHAR(1)	Length semantics of the column - C

Column Name	Data Type	Description
		- B (It is set to "C" if the length was specified in characters, "B" if in bytes)
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column
HIDDEN_COLUMN	CHAR(3)	(Not supported)
SEGMENT_COLUMN_ID	VARCHAR(3)	(Not supported)
INTERNAL_COLUMN_ID	VARCHAR(3)	(Not supported)
QUALIFIED_COLUMN_NAME	VARCHAR(4000)	(Not supported)

- See also

[ALL_TAB_COLS](#)

[ALL_TBL_COLS](#)

[DBA_TBL_COLS](#)

[USER_TAB_COLS](#)

[USER_TBL_COLS](#)

3.2.203. DBA_TAB_COLUMNS

Synonym for DBA_TBL_COLUMNS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table or view
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value

Column Name	Data Type	Description
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column

- See also

[ALL_TAB_COLUMNS](#)

[ALL_TBL_COLUMNS](#)

[ALL_TBL_COLUMNS_WITH_DNO](#)

[DBA_TBL_COLUMNS](#)

[USER_TAB_COLUMNS](#)

[USER_TBL_COLUMNS](#)

3.2.204. DBA_TAB_COL_STATISTICS

Synonym for DBA_TBL_COL_STATISTICS.

- Columns

Column Name	Data Type	Description
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table

Column Name	Data Type	Description
COLUMN_NAME	VARCHAR(128)	Name of the column
NUM_DISTINCT	NUMBER	The number of distinct values
LOW_VALUE	VARCHAR(4000)	The lowest value in the column
HIGH_VALUE	VARCHAR(4000)	The highest value in the column
DENSITY	NUMBER	Density of the column
NUM_NULLS	NUMBER	The number of NULL values
NUM_BUCKETS	NUMBER	The number of buckets for the histogram
LAST_ANALYZED	DATE	Date of the most recent analysis for the column
SAMPLE_SIZE	NUMBER	Size of the sample used for analyzing statistics for the column
AVG_COL_LEN	NUMBER	Average length of the column (in bytes)
HISTOGRAM	VARCHAR(15)	Indicates the type of histogram

- See also

[ALL_TAB_COL_STATISTICS](#)

[ALL_TBL_COL_STATISTICS](#)

[DBA_TBL_COL_STATISTICS](#)

[USER_TAB_COL_STATISTICS](#)

[USER_TBL_COL_STATISTICS](#)

3.2.205. DBA_TAB_COMMENTS

Displays comments on all tables and views in the database.

- See also

[ALL_TAB_COMMENTS](#)

[ALL_TBL_COMMENTS](#)

[DBA_TBL_COMMENTS](#)

3.2.206. DBA_TAB_HISTOGRAMS

Synonym for DBA_TBL_HISTOGRAMS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
ENDPOINT_NUMBER	NUMBER	History bucket number
ENDPOINT_VALUE	NUMBER	End point value of the current bucket
ENDPOINT_ACTUAL_VALUE	VARCHAR(4000)	Actual string value of the end point value of the current bucket

- See also

[ALL_TAB_HISTOGRAMS](#)

[ALL_TBL_HISTOGRAMS](#)

[DBA_TBL_HISTOGRAMS](#)

[USER_TAB_HISTOGRAMS](#)

[USER_TBL_HISTOGRAMS](#)

3.2.207. DBA_TAB_PARTITIONS

Synonym for DBA_TBL_PARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
COMPOSITE	VARCHAR(3)	Whether or not the partition belongs to a composite-partitioned table

Column Name	Data Type	Description
		- YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the table partition
SUBPARTITION_COUNT	NUMBER	The number of subpartitions which belong to the partition
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the table
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
COMPRESSION	VARCHAR(3)	Whether or not the table partition has been compressed - YES - NO
COMPRESS_FOR	VARCHAR(12)	Compression level of the partition - QUERY LOW - QUERY HIGH - ARCHIVE LOW - ARCHIVE HIGH - NULL
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
NUM_ROWS	NUMBER	The number of rows within the table partition

Column Name	Data Type	Description
BLOCKS	NUMBER	The number of data blocks containing information about the table partition
LAST_ANALYZED	DATE	Date of the most recent analysis for the table partition
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO

- See also

[ALL_TAB_PARTITIONS](#)

[ALL_TBL_PARTITIONS](#)

[DBA_TBL_PARTITIONS](#)

[USER_TAB_PARTITIONS](#)

[USER_TBL_PARTITIONS](#)

3.2.208. DBA_TAB_PRIVS

Synonym for DBA_TBL_PRIVS.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with GRANT OPTION - YES - NO

- See also

[ALL_TAB_PRIVS](#)

[ALL_TBL_PRIVS](#)

[DBA_TBL_PRIVS](#)

[USER_TAB_PRIVS](#)

[USER_TBL_PRIVS](#)

3.2.209. DBA_TAB_SUBPARTITIONS

Synonym for DBA_TBL_SUBPARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
TABLE_NAME	VARCHAR(128)	Name of the table
PARTITION_NAME	VARCHAR(128)	Name of the table partition
SUBPARTITION_NAME	VARCHAR(128)	Name of the table subpartition
BOUND	LONG	Subpartition bound value
SUBPARTITION_NO	NUMBER	Subpartition number within the partition
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the subpartition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
COMPRESSION	VARCHAR(3)	Whether or not the table partition has been compressed - YES - NO

Column Name	Data Type	Description
COMPRESS_FOR	VARCHAR(12)	Compression level of the table subpartition - QUERY LOW - QUERY HIGH - ARCHIVE LOW - ARCHIVE HIGH - NULL
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO
NUM_ROWS	NUMBER	The number of rows within the table subpartition
LAST_ANALYZED	DATE	Date of the most recent analysis for the table subpartition

- See also

[ALL_TAB_SUBPARTITIONS](#)

[ALL_TBL_SUBPARTITIONS](#)

[DBA_TBL_SUBPARTITIONS](#)

3.2.210. DBA_TBL_COLS

Displays columns of all tables and views in the database.

- See also

[ALL_TAB_COLS](#)

[ALL_TBL_COLS](#)

[DBA_TAB_COLS](#)

[USER_TAB_COLS](#)

[USER_TBL_COLS](#)

3.2.211. DBA_TBL_COLUMNS

Displays columns of all tables and views in the database.

- See also

[ALL_TAB_COLUMNS](#)

[ALL_TBL_COLUMNS](#)

[ALL_TBL_COLUMNS_WITH_DNO](#)

[DBA_TAB_COLUMNS](#)

[USER_TAB_COLUMNS](#)

[USER_TBL_COLUMNS](#)

3.2.212. DBA_TBL_COL_STATISTICS

Displays statistics and a histogram of columns by extracting them from DBA_TBL_COLUMNS.

- See also

[ALL_TAB_COL_STATISTICS](#)

[ALL_TBL_COL_STATISTICS](#)

[DBA_TAB_COL_STATISTICS](#)

[USER_TAB_COL_STATISTICS](#)

[USER_TBL_COL_STATISTICS](#)

3.2.213. DBA_TBL_COMMENTS

Synonym for DBA_TAB_COMMENTS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the object
TABLE_TYPE	VARCHAR(9)	Type of the object
COMMENTS	VARCHAR(4000)	Comment on the object

- See also

[ALL_TAB_COMMENTS](#)

[ALL_TBL_COMMENTS](#)

[DBA_TAB_COMMENTS](#)

3.2.214. DBA_TBL_HISTOGRAMS

Displays histogram information on tables and views in the database.

- See also

[ALL_TAB_HISTOGRAMS](#)

[ALL_TBL_HISTOGRAMS](#)

[DBA_TAB_HISTOGRAMS](#)

[USER_TAB_HISTOGRAMS](#)

[USER_TBL_HISTOGRAMS](#)

3.2.215. DBA_TBL_PARTITIONS

Displays partition information of all tables in the database.

- See also

[ALL_TAB_PARTITIONS](#)

[ALL_TBL_PARTITIONS](#)

[DBA_TAB_PARTITIONS](#)

[USER_TAB_PARTITIONS](#)

[USER_TBL_PARTITIONS](#)

3.2.216. DBA_TBL_PRIVS

Displays object privileges granted on all tables in the database.

- See also

[ALL_TAB_PRIVS](#)

[ALL_TBL_PRIVS](#)

[DBA_TAB_PRIVS](#)

[USER_TAB_PRIVS](#)

[USER_TBL_PRIVS](#)

3.2.217. DBA_TBL_SUBPARTITIONS

Displays subpartitions of all tables in the database.

- See also

[ALL_TAB_SUBPARTITIONS](#)

[ALL_TBL_SUBPARTITIONS](#)

[DBA_TAB_SUBPARTITIONS](#)

3.2.218. DBA_TEMPFILES

Synonym for DBA_TEMP_FILES.

- Columns

Column Name	Data Type	Description
FILE_NAME	VARCHAR(256)	Name of the temporary data file
FILE_ID	NUMBER	ID of the data file
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace where the data file is contained
BYTES	NUMBER	Size of the data file in bytes
BLOCKS	NUMBER	Size of the data file in blocks
STATUS	CHAR(9)	Status of the data file

Column Name	Data Type	Description
		- UNUSED - ONLINE - OFFLINE - RESETLOG - RECOVERY
RELATIVE_FNO	NUMBER	Relative data file number
AUTOEXTENSIBLE	VARCHAR(3)	Auto extensible indicator - YES - NO
MAXBYTES	NUMBER	Maximum data file size in bytes
MAXBLOCKS	NUMBER	Maximum data file size in blocks
INCREMENT_BY	NUMBER	Auto increment value

- See also

[DBA_TEMP_FILES](#)

3.2.219. DBA_TEMP_FILES

Displays information of the temporary data files.

- Columns

Column Name	Data Type	Description
FILE_NAME	VARCHAR(256)	Name of the temporary data file
FILE_ID	NUMBER	ID of the data file
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace where the data file is contained
BYTES	NUMBER	Size of the data file in bytes
BLOCKS	NUMBER	Size of the data file in blocks

Column Name	Data Type	Description
STATUS	CHAR(9)	Status of the data file - UNUSED - ONLINE - OFFLINE - RESETLOG - RECOVERY
RELATIVE_FNO	NUMBER	Relative data file number
AUTOEXTENSIBLE	VARCHAR(3)	Auto extensible indicator - YES - NO
MAXBYTES	NUMBER	Maximum data file size in bytes
MAXBLOCKS	NUMBER	Maximum data file size in blocks
INCREMENT_BY	NUMBER	Auto increment value

- See also

[DBA_TEMPFILES](#)

3.2.220. DBA_TRIGGERS

Displays all triggers in the database.

- See also

[ALL_TRIGGERS](#)

[USER_TRIGGERS](#)

3.2.221. DBA_TRIGGER_COLS

Displays column information of all triggers in the database. The columns are the same as those in ALL_TRIGGER_COLS.

- See also

[ALL_TRIGGER_COLS](#)

[USER_TRIGGER_COLS](#)

3.2.222. DBA_TS_QUOTAS

Describe tablespace quotas for all user

- Columns

Column Name	Data Type	Description
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace
USERNAME	VARCHAR(128)	Name of the user
BYTES	NUMBER	Number of bytes charged to the user
MAX_BYTES	NUMBER	User's quota in bytes
BLOCKS	NUMBER	Number of blocks charged to the user
MAX_BLOCKS	NUMBER	User's quota in blocks
DROPPED	VARCHAR(3)	Whether the tablespace has been dropped

3.2.223. DBA_TYPES

Displays all types.

- See also

[ALL_TYPES](#)

[USER_TYPES](#)

3.2.224. DBA_TYPE_ATTRS

Displays all the attributes of this type.

- See also

[ALL_TYPE_ATTRS](#)

3.2.225. DBA_TYPE_METHODS

Displays all the methods of this type.

- See also

[ALL_TYPE_METHODS](#)

[USER_TYPE_METHODS](#)

3.2.226. DBA_UNDO_EXTENTS

Displays information about the extents in all undo segments.

- Columns

Column Name	Data Type	Description
USGMT_ID	NUMBER	ID of the undo segment containing the extent
EXTNO	NUMBER	Extent number
TS_ID	NUMBER	ID of the tablespace containing the extent
TS_NAME	VARCHAR	Name of the tablespace containing the extent
FILE_ID	NUMBER	ID of the file containing the extent
BLOCK_ID	NUMBER	Starting block number of the extent
BYTES	NUMBER	Size of the extent in bytes
BLOCKS	NUMBER	Size of the extent in blocks
STATUS	VARCHAR(30)	Current status of the extent
IS_CURRENT	VARCHAR(12)	Whether the extent is current extent or not

3.2.227. DBA_UNDO_SGMTS

Displays undo segments in the database.

- Columns

Column Name	Data Type	Description
SEGMENT_ID	NUMBER	ID of the segment
TABLESPACE_NAME	VARCHAR(128)	Name of the undo tablespace
FILE_ID	NUMBER	ID of the file containing the segment header
BLOCK_ID	NUMBER	ID of the block containing the segment header
STATUS	VARCHAR(15)	Status of the segment - ONLINE - OFFLINE - OFFLINE PENDING - DROPPED (Never reused)
RELATIVE_FNO	NUMBER	Relative file number of the segment header

- See also

[DBA_ROLLBACK_SEGS](#)

3.2.228. DBA_UPDATABLE_COLUMNS

Displays all join view columns that the DBA can update.

- See also

[ALL_UPDATABLE_COLUMNS](#)

[USER_UPDATABLE_COLUMNS](#)

3.2.229. DBA_USERS

Displays all users in the database.

- Columns

Column Name	Data Type	Description
USERNAME	VARCHAR(128)	Name of the user

Column Name	Data Type	Description
USER_ID	NUMBER	ID of the user
PASSWORD	VARCHAR(24)	Password of the user (Password is encrypted.)
ACCOUNT_STATUS	VARCHAR(30)	Account status - LOCKED - EXPIRED - LOCKED(TIMED) - EXPIRED(GRACE) - EXPIRED & LOCKED(TIMED) - EXPIRED(GRACE) & LOCKED(TIMED) - EXPIRED(GRACE) & LOCKED - EXPIRED & LOCKED - OPEN
LOCK_DATE	DATE	Date that the account was locked
EXPIRY_DATE	DATE	Date that the account was expired
DEFAULT_TABLESPACE	VARCHAR(128)	Default tablespace for data
CREATED	DATE	Date that the user was created
PROFILE	VARCHAR(255)	Profile assigned to the user
DEFAULT_TEMP_TABLESPACE	VARCHAR(128)	Default temporary tablespace for data
AUTHENTICATION_TYPE	VARCHAR(8)	Type of the authentication process for the user - PASSWORD - EXTERNAL

- See also

[ALL_USERS](#)

[USER_USERS](#)

3.2.230. DBA_VIEWS

Displays all views in the database.

- See also

[ALL_VIEWS](#)

[ALL_VIEWS_INTERNAL](#)

[USER_VIEWS](#)

3.2.231. DICTIONARY

Displays comments on tables and views in the data dictionary.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the table or view
COMMENTS	VARCHAR(4000)	Comments on the table or view

3.2.232. NLS_SESSION_PARAMETERS

Displays NLS parameters of the current user session.

- Columns

Column Name	Data Type	Description
PARAMETER	VARCHAR(64)	Name of the parameter
VALUE	VARCHAR(64)	Value of the parameter

3.2.233. PUBLICSYN

Displays all public synonyms in the database.

- Columns

Column Name	Data Type	Description
SYN_NAME	VARCHAR(128)	Name of the synonym
OBJ_OWNER	VARCHAR(128)	Owner of the object
OBJ_NAME	VARCHAR(257)	Name of the object
OBJ_TYPE	VARCHAR(9)	Type of the object

3.2.234. ROLE_ROLE_PRIVS

Displays the roles granted to other roles which the current user can access.

- Columns

Column Name	Data Type	Description
ROLE	VARCHAR(128)	Name of the role
GRANTED_ROLE	VARCHAR(128)	Role that was granted
ADMIN_OPTION	VARCHAR(3)	Whether or not the role was assigned with ADMIN OPTION - YES - NO - ERR

3.2.235. ROLE_SYS_PRIVS

Displays system privileges granted to roles which the current user can access.

- Columns

Column Name	Data Type	Description
ROLE	VARCHAR(128)	Name of the role
PRIVILEGE	VARCHAR(40)	Name of the privilege
ADMIN_OPTION	VARCHAR(3)	Whether or not the grant was assigned with ADMIN OPTION

Column Name	Data Type	Description
		- YES - NO - ERR

3.2.236. ROLE_TAB_PRIVS

Displays object privileges granted to roles which the current user can access.

- Columns

Column Name	Data Type	Description
ROLE	VARCHAR(128)	Name of the role
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
COLUMN_NAME	VARCHAR(128)	Name of the column, if applicable
PRIVILEGE	VARCHAR(40)	Object privilege granted to the role
ADMIN_OPTION	VARCHAR(3)	Whether or not the grant was assigned with ADMIN OPTION - YES - NO - ERR

3.2.237. SESSION_CONTEXT

Displays context attributes in the current session.

- Columns

Column Name	Data Type	Description
NAMESPACE	VARCHAR(128)	The namespace of the context attribute
ATTRIBUTE	VARCHAR(128)	The name of the attribute

Column Name	Data Type	Description
VALUE	VARCHAR(65532)	The value of the attribute

3.2.238. SESSION_PRIVS

Displays the system privileges granted to current session user.

- Columns

Column Name	Data Type	Description
PRIVILEGE	VARCHAR(40)	Name of the privilege

3.2.239. SESSION_ROLES

Displays roles granted to the current session user.

- Columns

Column Name	Data Type	Description
ROLE	VARCHAR(128)	Name of the role

3.2.240. SYS_OBJECTS

Displays IDs and types of all schema objects, and IDs of the segment header blocks in the database.

- Columns

Column Name	Data Type	Description
OBJECT_TYPE	VARCHAR(18)	Type of the object
OBJECT_TYPE_NO	NUMBER	ID of the object's type
SEGMENT_TYPE_NO	NUMBER	ID of the segment's type
OBJECT_ID	NUMBER	ID of the object
HEADER_FILE	NUMBER	ID of the data file containing the segment header
HEADER_BLOCK	NUMBER	ID of the disk block containing the segment header

Column Name	Data Type	Description
TS_NUMBER	NUMBER	ID of the tablespace containing the object
SEGMENT_ID	NUMBER	ID of the segment

3.2.241. USER_ARGUMENTS

Displays all parameters of the procedure or function that the current user owns.

- See also

[ALL_ARGUMENTS](#)

3.2.242. USER_AUDIT_TRAIL

Displays audit trails associated with the current user.

- Columns

Column Name	Data Type	Description
OS_USERNAME	VARCHAR(128)	Operating system user name who was set to be audited
USERNAME	VARCHAR(128)	Name of the user who was set to be audited
USERHOST	VARCHAR(21)	Name of the host machine from which the client has connected
TIMESTAMP	VARCHAR(19)	Audit trail-created time
OWNER	VARCHAR(128)	Owner of the object associated with the audited action
OBJ_NAME	VARCHAR(128)	Name of the object associated with the audited action
SESSIONID	NUMBER	Session ID
SERIALNO	NUMBER	Sequence number of the session
ENTRYID	NUMBER	Sequence number for each audit trail in the session
STATEMENTID	NUMBER	ID of the executed statement
PRIV_USED	VARCHAR(80)	Name of the privilege used to execute the audited action

Column Name	Data Type	Description
CLIENT_ID	VARCHAR(30)	Client identifier
INSTANCE_NUMBER	NUMBER	Instance number of RDBMS which performed the action
OS_PROCESS	VARCHAR(16)	Process ID of RDBMS
TRANSACTIONID	VARCHAR(65532)	Transaction ID that participated in the audited action
TSN	NUMBER	TSN of the audited action
SQL_TEXT	LONG	SQL of the audited action

- See also

[DBA_AUDIT_TRAIL](#)

3.2.243. USER_CATALOG

Displays all tables, views, synonyms, and sequences that the current user owns.

- See also

[ALL_CATALOG](#)

[DBA_CATALOG](#)

3.2.244. USER_COLL_TYPES

Displays all the collection types that the current user owns.

- See also

[ALL_COLL_TYPES](#)

[DBA_COLL_TYPES](#)

3.2.245. USER_COL_COMMENTS

Displays comments on all columns in the tables or views that the current user owns.

- See also

[ALL_COL_COMMENTS](#)

[DBA_COL_COMMENTS](#)

3.2.246. USER_COL_PRIVS

Displays object privileges of the columns for which the current user is the object owner, grantor, or grantee.

- See also

[ALL_COL_PRIVS](#)

[DBA_COL_PRIVS](#)

3.2.247. USER_COL_PRIVS_MADE

Displays columns for which the current user is the grantor.

- See also

[ALL_COL_PRIVS_MADE](#)

3.2.248. USER_COL_PRIVS_RECD

Displays columns for which the current user is the grantee.

- See also

[ALL_COL_PRIVS_RECD](#)

3.2.249. USER_CONSTRAINTS

Displays constraints defined in the table that the current user owns.

- See also

[ALL_CONSTRAINTS](#)

[DBA_CONSTRAINTS](#)

3.2.250. USER_CONS_COLUMNS

Displays columns that are owned by the current user and that are specified in integrity constraint definitions.

- See also

[ALL_CONS_COLUMNS](#)

[DBA_CONS_COLUMNS](#)

3.2.251. USER_DB_LINKS

Displays information for the database links that the current user owns.

- See also

[ALL_DB_LINKS](#)

[DBA_DB_LINKS](#)

3.2.252. USER_DEPENDENCIES

Displays dependencies between procedures, functions, packages, package bodies, triggers, and views that the current user owns.

- See also

[ALL_DEPENDENCIES](#)

[DBA_DEPENDENCIES](#)

3.2.253. USER_ENCRYPTED_COLUMNS

Displays information of all encrypted columns that the current user owns. The columns are the same as those in ALL_ENCRYPTED_COLUMNS(except for OWNER)

- See also

[ALL_ENCRYPTED_COLUMNS](#)

[DBA_ENCRYPTED_COLUMNS](#)

3.2.254. USER_ERRORS

Displays the recent errors in every view, procedure, function, package, package body, trigger, library, and java object owned by current user. The columns are the same as those in ALL_ERRORS.(except for OWNER)

- See also

[ALL_ERRORS](#)

[DBA_ERRORS](#)

3.2.255. USER_EXTENTS

Displays information of the extents contained in the segments that the current user owns.

- Columns

Column Name	Data Type	Description
SEGMENT_NAME	VARCHAR(128)	Name of the segment containing the extent
PARTITION_NAME	VARCHAR(128)	Partition name of the object (Null value for non-partitioned objects)
SEGMENT_TYPE	VARCHAR(18)	Type of the segment
TABLESPACE_NAME	VARCHAR(30)	Name of the tablespace containing the extent
EXTENT_ID	NUMBER	ID of the extent
BYTES	NUMBER	Size of the extent in bytes
BLOCKS	NUMBER	Size of the extent in blocks

- See also

[DBA_EXTENTS](#)

3.2.256. USER_EXTERNAL_LOCATIONS

Displays all external table locations that the current user owns.

- See also

[ALL_EXTERNAL_LOCATIONS](#)

[DBA_EXTERNAL_LOCATIONS](#)

3.2.257. USER_EXTERNAL_TABLES

Displays all external tables that the current user owns.

- See also

[ALL_EXTERNAL_TABLES](#)

[DBA_EXTERNAL_TABLES](#)

3.2.258. USER_FREE_SPACE

Displays information of the extents available for the tablespaces that the current user can access.

- Columns

Column Name	Data Type	Description
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace containing the extent
FILE_ID	NUMBER	ID of the file containing the extent
BLOCK_ID	NUMBER	Starting block number of the extent
BYTES	NUMBER	Size of the extent in bytes
BLOCKS	NUMBER	Size of the extent in blocks
RELATIVE_FNO	NUMBER	Relative file number of the extent

- See also

[DBA_FREE_SPACE](#)

3.2.259. USER_IDX_COLUMNS

Displays index columns of all tables that the current user owns.

- See also

[ALL_IDX_COLUMNS](#)

[ALL_IND_COLUMNS](#)

[DBA_IDX_COLUMNS](#)

[DBA_IND_COLUMNS](#)

[USER_IND_COLUMNS](#)

3.2.260. USER_IDX_EXPRESSIONS

Displays expressions on function-based index columns of all tables that the current user owns.

- See also

[ALL_IDX_EXPRESSIONS](#)

[ALL_IND_EXPRESSIONS](#)

[DBA_IDX_EXPRESSIONS](#)

[DBA_IND_EXPRESSIONS](#)

[USER_IND_EXPRESSIONS](#)

3.2.261. USER_IDX_PARTITIONS

Displays partitions of the indexes that the current user owns.

- See also

[ALL_IDX_PARTITIONS](#)

[ALL_IND_PARTITIONS](#)

[DBA_IDX_PARTITIONS](#)

[DBA_IND_PARTITIONS](#)

[USER_IND_PARTITIONS](#)

3.2.262. USER_INDEXES

Displays indexes of all tables that the current user owns.

- See also

[ALL_INDEXES](#)

[DBA_INDEXES](#)

3.2.263. USER_IND_COLUMNS

Synonym for USER_IDX_COLUMNS.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_LENGTH	NUMBER	Length of the column within the index
DESCEND	VARCHAR(4)	Sorting order in columns - DESC - ASC

- See also

[ALL_IDX_COLUMNS](#)

[ALL_IND_COLUMNS](#)

[DBA_IDX_COLUMNS](#)

[DBA_IND_COLUMNS](#)

[USER_IDX_COLUMNS](#)

3.2.264. USER_IND_EXPRESSIONS

Synonym for USER_IDX_EXPRESSIONS.

- Columns

Column Name	Data Type	Description
INDEX_OWNER	VARCHAR(128)	Owner of the index

Column Name	Data Type	Description
INDEX_NAME	VARCHAR(128)	Name of the index
TABLE_OWNER	VARCHAR(128)	Owner of the table
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_POSITION	NUMBER	Position of the column within the index
COLUMN_EXPRESSION	LONG	Expression of the column within the index

- See also

[ALL_IDX_EXPRESSIONS](#)

[ALL_IND_EXPRESSIONS](#)

[DBA_IDX_EXPRESSIONS](#)

[DBA_IND_EXPRESSIONS](#)

[USER_IDX_EXPRESSIONS](#)

3.2.265. USER_IND_PARTITIONS

Synonym for USER_IDX_PARTITIONS.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the user
INDEX_NAME	VARCHAR(128)	Name of the index
COMPOSITE	VARCHAR(3)	Whether or not partition belongs to a composite-partitioned index - YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the partition
SUBPARTITION_COUNT	NUMBER	The number of the subpartitions that belong to the partition

Column Name	Data Type	Description
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the index
BLEVEL	NUMBER	Level of B-tree index (The level is 0 for a B-tree with only a root node)
LEAF_BLOCKS	NUMBER	The number of leaf blocks in the index
DISTINCT_KEYS	NUMBER	The number of distinct keys in the index
CLUSTERING_FACTOR	NUMBER	The clustering factor of the index
STATUS	VARCHAR(8)	Current status of the index - USABLE - UNUSABLE
NUM_ROWS	NUMBER	The number of rows in the index
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
MAX_TRANS	NUMBER	Value of the MAX_TRANS parameter
INITIAL_EXTENT	NUMBER	Value of the INITIAL_EXTENT parameter
MIN_EXTENT	NUMBER	Value of the MIN_EXTENT parameter
LOGGING	VARCHAR(3)	Whether logging is enabled or not

Column Name	Data Type	Description
		- YES - NO
LAST_ANALYZED	DATE	Date of the most recent analysis for the index partition

- See also

[ALL_IDX_PARTITIONS](#)

[ALL_IND_PARTITIONS](#)

[DBA_IDX_PARTITIONS](#)

[DBA_IND_PARTITIONS](#)

[USER_IDX_PARTITIONS](#)

3.2.266. USER_JAVA_ARGUMENTS

Displays all parameters that the current user owns.

- See also

[ALL_JAVA_ARGUMENTS](#)

[DBA_JAVA_ARGUMENTS](#)

3.2.267. USER_JAVA_CLASSES

Displays all classes that the current user owns.

- See also

[ALL_JAVA_CLASSES](#)

[DBA_JAVA_CLASSES](#)

3.2.268. USER_JAVA_FIELDS

Displays all fields that the current user owns.

- See also

[ALL_JAVA_FIELDS](#)

[DBA_JAVA_FIELDS](#)

3.2.269. USER_JAVA_METHODS

Displays all methods that the current user owns.

- See also

[ALL_JAVA_METHODS](#)

[DBA_JAVA_METHODS](#)

3.2.270. USER_JOBS

Displays all jobs that the current user owns.

- See also

[ALL_JOBS](#)

[DBA_JOBS](#)

3.2.271. USER_LIBRARIES

Displays all libraries that the current user owns.

- See also

[ALL_LIBRARIES](#)

[DBA_LIBRARIES](#)

3.2.272. USER_LOBS

Displays large objects (LOB) which belong to all tables that the current user owns.

- See also

[ALL_LOBS](#)

[DBA_LOBS](#)

3.2.273. USER_LOB_PARTITIONS

Displays all LOB partitions which belong to all tables that the current user owns.

- See also

[ALL_LOB_PARTITIONS](#)

[DBA_LOB_PARTITIONS](#)

3.2.274. USER_LOB_SUBPARTITIONS

Displays all LOB subpartitions which belong to all tables that the current user owns.

- See also

[ALL_LOB_SUBPARTITIONS](#)

[DBA_LOB_SUBPARTITIONS](#)

3.2.275. USER_LOG_GROUPS

Displays the log group definitions on the tables owned by the current user.

- See also

[ALL_LOG_GROUPS](#)

[DBA_LOG_GROUPS](#)

3.2.276. USER_LOG_GROUP_COLUMNS

Displays columns that are owned by the current user and that are specified in log groups.

- See also

[ALL_LOG_GROUP_COLUMNS](#)

[DBA_LOG_GROUP_COLUMNS](#)

3.2.277. USER_METHOD_PARAMS

Displays the method parameters of the type that the current user owns.

- See also

[ALL_METHOD_PARAMS](#)

[DBA_METHOD_PARAMS](#)

3.2.278. USER_METHOD_RESULTS

Displays the result of the method of this type that the current user owns.

- See also

[ALL_METHOD_RESULTS](#)

[DBA_METHOD_RESULTS](#)

3.2.279. USER_MVIEWS

Displays all materialized views that the current user owns. The columns are the same as those in ALL_MVIEWS.

- See also

[ALL_MVIEWS](#)

[DBA_MVIEWS](#)

3.2.280. USER_MVIEW_COMMENTS

Displays comments on all materialized views that the current user owns.

- See also

[ALL_MVIEW_COMMENTS](#)

[DBA_MVIEW_COMMENTS](#)

3.2.281. USER_MVIEW_LOGS

Displays all materialized view logs that the current user owns. The columns are the same as those in ALL_MVIEW_LOGS.

- See also

[ALL_MVIEW_LOGS](#)

[DBA_MVIEW_LOGS](#)

3.2.282. USER_OBJECTS

Displays all objects that the current user owns.

- See also

[ALL_OBJECTS](#)

[DBA_OBJECTS](#)

3.2.283. USER_OBJ_AUDIT_OPTS

Displays the current user's own objects which are being audited.

- Columns

Column Name	Data Type	Description
OBJECT_NAME	VARCHAR(128)	Name of the object
OBJECT_TYPE	VARCHAR(9)	Type of the object - TABLE - VIEW - SEQUENCE - PROCEDURE - DIRECTORY - JAVA
ALT	VARCHAR(5)	ALTER auditing option for success or failure
DEL	VARCHAR(5)	DELETE auditing option for success or failure
IND	VARCHAR(5)	INDEX auditing option for success or failure
INS	VARCHAR(5)	INSERT auditing option for success or failure
LOC	VARCHAR(5)	LOCK auditing option for success or failure

Column Name	Data Type	Description
SEL	VARCHAR(5)	SELECT auditing option for success or failure
UPD	VARCHAR(5)	UPDATE auditing option for success or failure
REF	VARCHAR(5)	REFERENCE auditing option for success or failure
EXE	VARCHAR(5)	EXECUTE auditing option for success or failure
REA	VARCHAR(5)	READ auditing option for success or failure
WRI	VARCHAR(5)	WRITE auditing option for success or failure

- See also

[DBA_OBJ_AUDIT_OPTS](#)

3.2.284. USER_PACKAGE_MEMBER_TYPES

Displays types of the package that the current user owns.

- See also

[ALL_PACKAGE_MEMBER_TYPES](#)

[DBA_PACKAGE_MEMBER_TYPES](#)

3.2.285. USER_PART_INDEXES

Displays partitioning information for the partitioned indexes that the current user owns.

- See also

[ALL_PART_INDEXES](#)

[DBA_PART_INDEXES](#)

3.2.286. USER_PART_KEY_COLUMNS

Displays partitioning key columns for all partitioned tables or indexes that the current user owns.

- See also

[ALL_PART_KEY_COLUMNS](#)

[DBA_PART_KEY_COLUMNS](#)

3.2.287. USER_PART_LOBS

Displays LOBs which belong to the partitioned tables that the current user owns.

- See also

[ALL_PART_LOBS](#)

[DBA_PART_LOBS](#)

3.2.288. USER_PART_TABLES

Displays partitioning information of the partitioned tables that the current user owns.

- See also

[ALL_PART_TABLES](#)

[DBA_PART_TABLES](#)

3.2.289. USER_PROCEDURES

Displays all procedures that the current user owns.

- See also

[ALL_PROCEDURES](#)

[DBA_PROCEDURES](#)

3.2.290. USER_QUEUES

Describes the operational characteristics of every queue owned by the current user.

- See also

[ALL_QUEUES](#)

[DBA_QUEUES](#)

3.2.291. USER_QUEUE_SUBSCRIBERS

Shows the list of subscribers on queues that are under the current user's schema.

- See also

[ALL_QUEUE_SUBSCRIBERS](#)

[DBA_QUEUE_SUBSCRIBERS](#)

3.2.292. USER_QUEUE_TABLES

Describes the queues in the queue tables created in the current user's schema.

- See also

[ALL_QUEUE_TABLES](#)

[DBA_QUEUE_TABLES](#)

3.2.293. USER_RECYCLEBIN

Displays information of all temporarily deleted objects that the current user owns. The columns are the same as those in ALL_RECYCLEBIN.

- See also

[ALL_RECYCLEBIN](#)

[DBA_RECYCLEBIN](#)

3.2.294. USER_ROLE_PRIVS

Displays roles granted to the current user.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user or role which was granted the role
GRANTED_ROLE	VARCHAR(128)	Granted role
ADMIN_OPTION	VARCHAR(3)	Whether or not the role was assigned with ADMIN OPTION

Column Name	Data Type	Description
		- YES - NO - ERR
DEFAULT_ROLE	VARCHAR(3)	Whether the role is set to default role for the user - YES - NO - ERR

- See also

[DBA_ROLE_PRIVS](#)

3.2.295. USER_SCHEDULER_CHAINS

Displays all scheduler chains that the current user owns.

- See also

[ALL_SCHEDULER_CHAINS](#)

[DBA_SCHEDULER_CHAINS](#)

3.2.296. USER_SCHEDULER_JOBS

Displays all scheduler jobs that the current user owns.

- See also

[ALL_SCHEDULER_JOBS](#)

[DBA_SCHEDULER_JOBS](#)

3.2.297. USER_SCHEDULER_PROGRAMS

Displays all scheduler programs that the current user owns.

- See also

[ALL_SCHEDULER_PROGRAMS](#)

[DBA_SCHEDULER_PROGRAMS](#)

3.2.298. USER_SCHEDULER_RULES

Displays all scheduler rules that the current user owns.

- See also

[ALL_SCHEDULER_RULES](#)

[DBA_SCHEDULER_RULES](#)

3.2.299. USER_SCHEDULER_RULE_CTX

Displays all scheduler rule ctx that the current user owns.

- See also

[ALL_SCHEDULER_RULE_CTX](#)

[DBA_SCHEDULER_RULE_CTX](#)

3.2.300. USER_SCHEDULER_RUNNING_JOBS

Displays all scheduler running jobs that the current user owns.

- See also

[ALL_SCHEDULER_RUNNING_JOBS](#)

[DBA_SCHEDULER_RUNNING_JOBS](#)

3.2.301. USER_SCHEDULER_STEPS

Displays all scheduler steps that the current user owns.

- See also

[ALL_SCHEDULER_STEPS](#)

[DBA_SCHEDULER_STEPS](#)

3.2.302. USER_SCHEDULER_STEP_CTX

Displays all scheduler step context the current user owns.

- See also

[ALL_SCHEDULER_STEP_CTX](#)

[DBA_SCHEDULER_STEP_CTX](#)

3.2.303. USER_SEGMENTS

Displays all segments which belong to the current user.

- See also

[ALL_SEGMENTS](#)

[DBA_SEGMENTS](#)

3.2.304. USER_SEQUENCES

Displays all sequences that the current user owns.

- See also

[ALL_SEQUENCES](#)

[DBA_SEQUENCES](#)

3.2.305. USER_SOURCE

Displays source texts of the stored objects in the database such as procedures, functions, package bodies, or triggers.

- See also

[ALL_SOURCE](#)

[DBA_SOURCE](#)

3.2.306. USER_SUBPART_KEY_COLUMNS

Displays subpartitioning key columns of the partitioned tables or indexes that the current user owns.

- See also

[ALL_SUBPART_KEY_COLUMNS](#)

[DBA_SUBPART_KEY_COLUMNS](#)

3.2.307. USER_SYNONYMS

Displays synonyms that the current user owns.

- See also

[ALL_SYNONYMS](#)

[DBA_SYNONYMS](#)

3.2.308. USER_SYS_PRIVS

Displays system privileges granted to the current user.

- Columns

Column Name	Data Type	Description
USERNAME	VARCHAR(128)	Name of the current user or PUBLIC
PRIVILEGE	VARCHAR(40)	Name of the privilege
ADMIN_OPTION	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO - ERR

- See also

[DBA_SYS_PRIVS](#)

3.2.309. USER_TABLES

Displays all tables that the current user owns.

- See also

[ALL_TABLES](#)

[DBA_TABLES](#)

3.2.310. USER_TABLESPACES

Synonym for DBA_TABLESPACES.

- Columns

Column Name	Data Type	Description
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace that contains the table
TS_ID	NUMBER	ID of the tablespace
DATAFILE_COUNT	NUMBER	The number of data files
BLOCK_SIZE	NUMBER	Size of the tablespace block
NEXT_EXTENT	NUMBER	Size of the next extent
STATUS	VARCHAR(9)	Current status of the tablespace - ONLINE - OFFLINE
CONTENTS	VARCHAR(9)	Contents of the tablespace - TEMPORARY - PERMANENT - UNDO
LOGGING	VARCHAR(9)	Whether logging is enabled or not - YES - NO
FORCE_LOGGING	VARCHAR(3)	Whether force logging is enabled or not - YES - NO

Column Name	Data Type	Description
ALLOCATION_TYPE	VARCHAR(7)	Type of extent allocation in effect for the tablespace: - SYSTEM - UNIFORM
ENCRYPTED	VARCHAR(3)	Whether tablespace encryption is enabled or not - YES - NO
INITIAL_EXTENT	NUMBER	Default initial extent size
MIN_EXTENTS	NUMBER	Default minimum number of extents
MAX_EXTENTS	NUMBER	Default maximum number of extents
EXTENT_MANAGEMENT	VARCHAR(5)	Type of extent management - LOCAL
SEGMENT_SPACE_MANAGEMENT	VARCHAR(4)	Type of segment space management - AUTO

- See also

[DBA_TABLESPACES](#)

3.2.311. USER_TAB_COLS

Synonym for USER_TBL_COLS.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)

Column Name	Data Type	Description
DATA_PRECISION	NUMBER	Precision level of the column value
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
NUM_NULLS	NUMBER	(Not supported)
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column
HIDDEN_COLUMN	CHAR(3)	(Not supported)
SEGMENT_COLUMN_ID	VARCHAR(3)	(Not supported)
INTERNAL_COLUMN_ID	VARCHAR(3)	(Not supported)
QUALIFIED_COLUMN_NAME	VARCHAR(4000)	(Not supported)

- See also

[ALL_TAB_COLS](#)

[ALL_TBL_COLS](#)

[DBA_TAB_COLS](#)

[DBA_TBL_COLS](#)

[USER_TBL_COLS](#)

3.2.312. USER_TAB_COLUMNS

Synonym for USER_TBL_COLUMNS.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the table or view
COLUMN_NAME	VARCHAR(128)	Name of the column
DATA_TYPE	VARCHAR(65532)	Data type of the column
DATA_LENGTH	NUMBER	Column length (in bytes)
DATA_PRECISION	NUMBER	Precision level of the column value
DATA_SCALE	NUMBER	Scale of the column value
NULLABLE	VARCHAR(1)	Whether NULL values are allowed or not - Y - N (It is set to "N" if NOT NULL constraints are defined or the column is a part of the primary key)
COLUMN_ID	NUMBER	ID of the column
DATA_DEFAULT	LONG	Default value of the column
CHAR_USED	VARCHAR(1)	Length semantics of the column - C - B (It is set to "C" if the length was specified in characters, "B" if in bytes)
VIRTUAL_COLUMN	CHAR(1)	Whether the column is a virtual column

- See also

[ALL_TAB_COLUMNS](#)

[ALL_TBL_COLUMNS](#)

[ALL_TBL_COLUMNS_WITH_DNO](#)

[DBA_TAB_COLUMNS](#)

[DBA_TBL_COLUMNS](#)

[USER_TBL_COLUMNS](#)

3.2.313. USER_TAB_COL_STATISTICS

Synonym for USER_TBL_COL_STATISTICS.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
NUM_DISTINCT	NUMBER	The number of distinct values
LOW_VALUE	VARCHAR(4000)	The lowest value in the column
HIGH_VALUE	VARCHAR(4000)	The highest value in the column
DENSITY	NUMBER	Density of the column
NUM_NULLS	NUMBER	The number of NULL values
NUM_BUCKETS	NUMBER	The number of buckets for the histogram
LAST_ANALYZED	DATE	Date of the most recent analysis for the column
SAMPLE_SIZE	NUMBER	Size of the sample used for analyzing statistics for the column
AVG_COL_LEN	NUMBER	Average length of the column (in bytes)
HISTOGRAM	VARCHAR(15)	Indicates the type of histogram

- See also

[ALL_TAB_COL_STATISTICS](#)

[ALL_TBL_COL_STATISTICS](#)

[DBA_TAB_COL_STATISTICS](#)

[DBA_TBL_COL_STATISTICS](#)

[USER_TBL_COL_STATISTICS](#)

3.2.314. USER_TAB_COMMENTS

Displays comments on all tables and views that the current user owns.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the object
TABLE_TYPE	VARCHAR(9)	Type of the object
COMMENTS	VARCHAR(4000)	Comment on the object

- See also

[USER_TBL_COMMENTS](#)

3.2.315. USER_TAB_HISTOGRAMS

Synonym for USER_TBL_HISTOGRAMS.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the table
COLUMN_NAME	VARCHAR(128)	Name of the column
ENDPOINT_NUMBER	NUMBER	History bucket number
ENDPOINT_VALUE	NUMBER	End point value of the current bucket
ENDPOINT_ACTUAL_VALUE	VARCHAR(4000)	Actual string value of the end point value of the current bucket

- See also

[ALL_TAB_HISTOGRAMS](#)

[ALL_TBL_HISTOGRAMS](#)

[DBA_TAB_HISTOGRAMS](#)

[DBA_TBL_HISTOGRAMS](#)

3.2.316. USER_TAB_PARTITIONS

Synonym for USER_TBL_PARTITIONS.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the table
COMPOSITE	VARCHAR(3)	Whether or not the partition belongs to a composite-partitioned table - YES - NO
PARTITION_NAME	VARCHAR(128)	Name of the table partition
SUBPARTITION_COUNT	NUMBER	The number of subpartitions which belong to the partition
BOUND	LONG	Partition bound value
PARTITION_NO	NUMBER	Partition number within the table
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the partition belongs
PCT_FREE	NUMBER	Value of the PCTFREE parameter
INI_TRANS	NUMBER	Value of the INITRANS parameter
NEXT_EXTENT	NUMBER	Size of the next extent
MAX_EXTENTS	NUMBER	Value of the MAX EXTENTS parameter
COMPRESSION	VARCHAR(3)	Whether or not the table partition has been compressed - YES - NO
COMPRESS_FOR	VARCHAR(12)	Compression level of the partition - QUERY LOW - QUERY HIGH

Column Name	Data Type	Description
		- ARCHIVE LOW - ARCHIVE HIGH - NULL
BUFFER_POOL	VARCHAR(7)	Type of the buffer pool - DEFAULT - KEEP - RECYCLE
NUM_ROWS	NUMBER	The number of rows within the table partition
BLOCKS	NUMBER	The number of data blocks containing information about the table partition
LAST_ANALYZED	DATE	Date of the most recent analysis for the table partition
LOGGING	VARCHAR(3)	Whether logging is enabled or not - YES - NO

- See also

[ALL_TAB_PARTITIONS](#)

[ALL_TBL_PARTITIONS](#)

[DBA_TAB_PARTITIONS](#)

[DBA_TBL_PARTITIONS](#)

[USER_TBL_PARTITIONS](#)

3.2.317. USER_TAB_PRIVS

Synonym for USER_TBL_PRIVS.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Owner of the object
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with GRANT OPTION - YES - NO

- See also

[ALL_TAB_PRIVS](#)

[ALL_TBL_PRIVS](#)

[DBA_TAB_PRIVS](#)

[DBA_TBL_PRIVS](#)

[USER_TBL_PRIVS](#)

3.2.318. USER_TAB_PRIVS_MADE

Synonym for USER_TBL_PRIVS_MADE.

- Columns

Column Name	Data Type	Description
GRANTEE	VARCHAR(128)	Name of the user to whom the privilege was granted
OWNER	VARCHAR(128)	Name of the object owner
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table

Column Name	Data Type	Description
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO

- See also

[ALL_TAB_PRIVS_MADE](#)

[ALL_TBL_PRIVS_MADE](#)

[USER_TBL_PRIVS_MADE](#)

3.2.319. USER_TAB_PRIVS_RECD

Synonym for USER_TBL_PRIVS_RECD.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the object owner
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO

- See also

[USER_TBL_PRIVS_RECD](#)

3.2.320. USER_TBL_COLS

Displays columns of all tables and views that the current user owns.

- See also

[ALL_TAB_COLS](#)

[ALL_TBL_COLS](#)

[DBA_TAB_COLS](#)

[DBA_TBL_COLS](#)

[USER_TAB_COLS](#)

3.2.321. USER_TBL_COLUMNS

Displays columns of all tables and views that the current user owns.

- See also

[ALL_TAB_COLUMNS](#)

[ALL_TBL_COLUMNS](#)

[ALL_TBL_COLUMNS_WITH_DNO](#)

[DBA_TAB_COLUMNS](#)

[DBA_TBL_COLUMNS](#)

[USER_TAB_COLUMNS](#)

3.2.322. USER_TBL_COL_STATISTICS

Displays statistics and a histogram of columns by extracting them from USER_TBL_COLUMNS.

- See also

[ALL_TAB_COL_STATISTICS](#)

[ALL_TBL_COL_STATISTICS](#)

[DBA_TAB_COL_STATISTICS](#)

[DBA_TBL_COL_STATISTICS](#)

[USER_TAB_COL_STATISTICS](#)

3.2.323. USER_TBL_COMMENTS

Synonym for USER_TAB_COMMENTS.

- Columns

Column Name	Data Type	Description
TABLE_NAME	VARCHAR(128)	Name of the object
TABLE_TYPE	VARCHAR(9)	Type of the object
COMMENTS	VARCHAR(4000)	Comment on the object

- See also

[USER_TAB_COMMENTS](#)

3.2.324. USER_TBL_HISTOGRAMS

Displays histogram information of tables that the current user owns.

- See also

[ALL_TAB_HISTOGRAMS](#)

[ALL_TBL_HISTOGRAMS](#)

[DBA_TAB_HISTOGRAMS](#)

[DBA_TBL_HISTOGRAMS](#)

[USER_TAB_HISTOGRAMS](#)

3.2.325. USER_TBL_PARTITIONS

Displays partition information of all tables that the current user owns.

- See also

[ALL_TAB_PARTITIONS](#)

[ALL_TBL_PARTITIONS](#)

[DBA_TAB_PARTITIONS](#)

[DBA_TBL_PARTITIONS](#)

3.2.326. USER_TBL_PRIVS

Displays object privileges granted on all tables for which the current user is the object owner, grantor, or grantee.

- See also

[ALL_TAB_PRIVS](#)[ALL_TBL_PRIVS](#)[DBA_TAB_PRIVS](#)[DBA_TBL_PRIVS](#)[USER_TAB_PRIVS](#)

3.2.327. USER_TBL_PRIVS_MADE

Displays object privileges granted on tables for which the current user is the object owner.

- See also

[ALL_TAB_PRIVS_MADE](#)[ALL_TBL_PRIVS_MADE](#)[USER_TAB_PRIVS_MADE](#)

3.2.328. USER_TBL_PRIVS_RECD

Displays object privileges granted on tables for which the current user is the object grantee.

- Columns

Column Name	Data Type	Description
OWNER	VARCHAR(128)	Name of the object owner
TABLE_NAME	VARCHAR(128)	Name of the object
GRANTOR	VARCHAR(128)	Name of the user who granted the privilege
PRIVILEGE	VARCHAR(40)	Name of the privilege to the table

Column Name	Data Type	Description
GRANTABLE	VARCHAR(3)	Whether or not the privilege was granted with ADMIN OPTION - YES - NO

- See also

[USER_TAB_PRIVS_RECD](#)

3.2.329. USER_TRIGGERS

Displays all triggers that the current user owns.

- See also

[ALL_TRIGGERS](#)

[DBA_TRIGGERS](#)

3.2.330. USER_TRIGGER_COLS

Displays column information of all triggers that the current user owns and all triggers on tables that the current user owns The columns are the same as those in ALL_TRIGGER_COLS.

- See also

[ALL_TRIGGER_COLS](#)

[DBA_TRIGGER_COLS](#)

3.2.331. USER_TYPES

Displays all types that the current user owns.

- See also

[ALL_TYPES](#)

[DBA_TYPES](#)

3.2.332. USER_TYPE_ATTRS

Displays all the attributes of this type that the current user owns.

- See also

[ALL_TYPE_ATTRS](#)

[DBA_TYPE_ATTRS](#)

3.2.333. USER_TYPE_METHODS

Displays all the methods of this type that the current user owns.

- See also

[ALL_TYPE_METHODS](#)

[DBA_TYPE_METHODS](#)

3.2.334. USER_UPDATABLE_COLUMNS

Displays all join view columns that the current user can update.

- See also

[ALL_UPDATABLE_COLUMNS](#)

[DBA_UPDATABLE_COLUMNS](#)

3.2.335. USER_USERS

Displays a description on the current user.

- Columns

Column Name	Data Type	Description
USERNAME	VARCHAR(128)	Name of the user
USER_ID	NUMBER	ID of the user
ACCOUNT_STATUS	VARCHAR(30)	Account status - LOCKED

Column Name	Data Type	Description
		- EXPIRED - LOCKED(TIMED) - EXPIRED(GRACE) - EXPIRED & LOCKED(TIMED) - EXPIRED(GRACE) & LOCKED(TIMED) - EXPIRED(GRACE) & LOCKED - EXPIRED & LOCKED - OPEN
LOCK_DATE	DATE	Date that the account was locked
EXPIRY_DATE	DATE	Date that the account was expired
DEFAULT_TABLESPACE	VARCHAR(128)	Default tablespace for data
CREATED	DATE	Date that the user was created

- See also

[ALL_USERS](#)

[DBA_USERS](#)

3.2.336. USER_VIEWS

Displays all views that the current user owns.

- See also

[ALL_VIEWS](#)

[ALL_VIEWS_INTERNAL](#)

[DBA_VIEWS](#)

제4장 Dynamic View

4.1. Overview

A **dynamic view**, which is also called Dynamic Performance View (DPV), belongs to the SYS user schema. Dynamic views are used by the DBA to monitor the internal operating status of Tiberio and thus users are required to have DBA authority when viewing most of the dynamic views.

Unlike static views providing structural information of the database, dynamic views provide status information of the database at a specific point in time. As the information of dynamic views is provided by information stored in memory and control files, it provides accurate information of the current status of the database.

As the information written to memory and the control file reflects changes over time, dynamic views are recommended for database monitoring and tuning. The dynamic views can be seen using the tbSQL tool, but are not updatable or deletable as they are managed by system.

4.2. List of Dynamic Views

This section provides the list of dynamic views of Tiberio in alphabetical order and describes the columns which corresponds to each dynamic view in the table.

The following is the list of summarized dynamic views:

Dynamic View	Description
V\$ACCESS	Displays information for the objects that the session is accessing.
V\$ACTIVE_SESSION_HISTORY	Displays information on the active session history. To enable ACTIVE_SESSION_HISTORY, TOTAL_SHM_SIZE needs to be greater than 2GB.
V\$ALL_FILESTAT	Displays statistics of data file and temp file I/O.
V\$ARCHIVED_LOG	Displays archive log information.
V\$ARCHIVE_DEST_FILES	Displays archive log information for archive log files in LOG_ARCHIVE_DEST.
V\$AS_ALIAS	All Aliases in all disk spaces mounted by the AS instance.
V\$AS_DISK	All disks discovered by the AS instance.
V\$AS_DISKSPACE	All disk spaces discovered by the AS instance.
V\$AS_EXTENT_MAP	Extent map of each file in each disk space

Dynamic View	Description
V\$AS_FILE	All files in all disk spaces mounted by the AS instance.
V\$AS_OPERATION	Ongoing operations in each disk space
V\$AS_USER	All users in all disk spaces mounted by the AS instance.
V\$AS_USERGROUP	All usergroups in all disk spaces mounted by the AS instance.
V\$AS_USERGROUP_MEMBER	Each group members in all disk spaces mounted by the AS instance.
V\$AUTO_COALESCE	Displays statistics of an index auto coalesce operations
V\$BACKUP	Displays the status of online backup.
V\$BACKUP_ARCHIVED_LOG	Displays information of backup archive logs.
V\$BACKUP_SET	Displays information of backup sets.
V\$BACKUP_SET_TABLESPACE	Displays information of backup tablespace
V\$BG_SESSION	Displays information on each background session.
V\$BG_SESSSTAT	Displays statistics of each background session.
V\$BH	Displays information for all buffers.
V\$BLOCKER_SESSION	Displays blocker sessions which are not blocked by other session.
V\$BPARAMETERS	Views the value of the parameter set in BTIP.
V\$BUFFER_CACHE_ADVICE	Display the estimate hit ratios
V\$BUFFER_POOL	Displays information for buffer pools.
V\$BUFFER_POOL_STATISTICS	Displays statistics of buffer pools.
V\$CHECKPOINT	Displays information for checkpoints.
V\$CLUSTER_INTERCONNECTS	Displays interconnects available for use in cluster communication.
V\$CONTEXT	Displays context attributes in the current session.
V\$CONTROLFILE	Displays information for control files.
V\$CORRUPT_XID	Displays transactions whose recovery is suspended.
V\$DATABASE	Displays database status information.
V\$DATAFILE	Displays information for data files in the database.
V\$DATAFILE_HEADER	Displays information of datafiles by extracting it from file headers.
V\$DBFILE	Displays datafile names in the database.
V\$DBLINK	Displays information for the open database links in the current session.
V\$DBLINK_STATUS	Displays gateway and remote session information for the open database links in each session.
V\$DB_PIPES	Displays DBMS_PIPE information.
V\$ENCRYPTED_TABLESPACES	Displays information on encrypted tablespaces.

Dynamic View	Description
V\$ENCRYPTION_WALLET	Displays information of the status of the wallet.
V\$ENQUEUE_STAT	Displays statistics of locks.
V\$EST_CHECKPOINT_TIME	Displays information for estimated checkpoint time.
V\$EVENT_NAME	Displays event names.
V\$FILESTAT	Displays file read/write statistics.
V\$GLOBAL_TRANSACTION	Displays information of the currently running global transactions.
V\$INSTANCE	Displays instance statuses.
V\$INSTANCEMETRIC	Shows the load status of the current node in TAC.
V\$INSTANCEMETRIC_HISTORY	Shows the load status of the current node in TAC.
V\$INTERCONNECT_LATENCY	Displays interconnect latency in cluster
V\$INTERCONNECTION	Displays information of interconnection(s) in cluster
V\$IPARAM_DESC	Displays initialization parameters.
V\$LATCH	Displays spinlock information.
V\$LIBRARYCACHE	Displays information of PP cache and DD cache.
V\$LICENSE	Displays license information.
V\$LOCK	Displays locks that are currently in use.
V\$LOG	Displays information of log groups.
V\$LOGFILE	Displays information of log member files.
V\$LOG_HISTORY	Displays log history information.
V\$MEDIA_RECOVERY_PROGRESS	Displays the progress of media recovery.
V\$METRIC	Displays information on the metric history.
V\$METRICNAME	Displays specifications of the metrics.
V\$MYSTAT	Displays statistics of the current session.
V\$OBJECT_USAGE	Displays statistics about index usage gathered from the database for the indexes owned by the current user.
V\$OPEN_CURSOR	Displays information for all open cursors for each session
V\$OSSTAT	Displays various OS statistics.
V\$OSSTAT2	Displays various OS statistics.
V\$PARAMETERS	Displays values of initialization parameters.
V\$PATCH	Displays list of patch files.
V\$PE_PESPLAN	Displays elapsed time information of PES in the format of SQL execution plan.

Dynamic View	Description
V\$PE_PESSTAT	Displays statistics of each PES for parallel processing.
V\$PE_PROCESS	Displays information of each parallel execution process currently allocated by QC session.
V\$PE_SESSION	Displays sessions in parallel processing.
V\$PE_SYSSTAT	Displays statistics of parallel execution.
V\$PE_TQSTAT	Displays statistics of table queues for parallel processing.
V\$PGASTAT	Displays statistics of PGA.
V\$PROCESS	Displays processes and threads used in RDBMS.
V\$PROXY_SQLTEXT	Displays texts of SQL statements that are remotely executed through the database link.
V\$PROXY_SQL_PARAM	Displays bind parameters of SQL statements that are remotely executed through the database link.
V\$RECOVERY_FILE_STATUS	Displays the status of a file that is being recovered.
V\$RECOVERY_PROGRESS	Displays recovery progress.
V\$RECOVERY_STATUS	Displays the status of media recovery progress.
V\$RECOVER_FILE	Displays files which require media recovery.
V\$RESERVED_WORDS	Displays a list of all SQL keywords.
V\$RESULT_CACHE_DEPENDENCY	Displays the depends-on relationship between cached result and dependencies.
V\$RESULT_CACHE_OBJECTS	Displays Result Cache Objects and their attributes.
V\$RESULT_CACHE_OBJECT_STATISTICS	Displays Result Cache Object statistics.
V\$RESULT_CACHE_STATISTICS	Displays various Result Cache settings and usage statistics.
V\$ROLLSTAT	Displays statistics of Undo usage.
V\$ROWCACHE	Displays details of status information on DD cache.
V\$RSBSTAT	Displays Stats of RSBs
V\$RSRC_CONSUMER_GROUP	Displays data related to currently active resource consumer groups
V\$RSRC_PLAN	Displays the names of all currently active resource plans
V\$RSRC_SESSION_INFO	Displays resource manager statistics per session
V\$RUNNING_JOBS	Displays information on running jobs.
V\$RUNNING_JOBS_WITH_NAME	Displays information on running jobs with name.
V\$SEGMENT_STATISTICS	!!! No documentation yet !!!

Dynamic View	Description
V\$SESSION	Displays information on each session.
V\$SESSION_EVENT	Displays events that are performed in each session.
V\$SESSION_IO	Displays input/output which occurred in each session.
V\$SESSION_LONGOPS	Displays status of sessions taking longer time than specified in LONGOPS_THRESHOLD_SEC seconds.
V\$SESSION_WAIT	Displays the waiting status of each session.
V\$SESSTAT	Displays statistics of each session.
V\$SESS_TIME_MODEL	Displays the session-level time statistics.
V\$SGA	Displays information on shared memory used in the database.
V\$SGASTAT	Displays information on the shared pool for a database, such as its purpose and how much of the shared pool is used.
V\$SHP_ADVICE	Displays advice information on the shared pool for a database, such as a recommended shared pool size.
V\$SPINUSE_STAT	Displays statistics of Spinlock.
V\$SQL	Displays details of a SQL child cursor execution.
V\$SQLAREA	Displays details of SQL statement execution.
V\$SQLSTATS	Displays information on SQL statement execution.
V\$SQLTEXT	Displays texts of SQL statements belonging to the cursor.
V\$SQLTEXT2	Displays texts of SQL statements belonging to the cursor.
V\$SQLTEXT_WITH_NEWLINES	Displays texts of SQL statements belonging to the cursor, without removing newline characters or blank characters.
V\$SQLTEXT_WITH_NEWLINES2	Displays texts of SQL statements belonging to the cursor, without removing newline characters or blank characters.
V\$SQL_BIND_CAPTURE	Displays the values of the captured bind variables from the current session
V\$SQL_BIND_CAPTURE_ALL	Displays the values of the captured bind variables from all sessions
V\$SQL_EXPC_INFO	Displays information about expression execution of a physical plan
V\$SQL_MONITOR	Shows the details of SQL statements that are currently being monitored or those that have been monitored through the real time SQL monitoring function.
V\$SQL_PLAN	Displays information on physical plans to execute SQL statements.
V\$SQL_PLAN_MONITOR	Displays plan level information about each SQL execution registered in V\$SQL_MONITOR. Each row corresponds to a single plan operation of one SQL execution.
V\$SQL_PLAN_STATISTICS	Displays statistics of results of each physical plan job.

Dynamic View	Description
V\$SQL_WORKAREA	Display information about work areas used by SQL cursors.
V\$SQL_WORKAREA_HISTOGRAM	Display the cumulative work area execution statistics
V\$SSVR_CLIENT	Displays information of valid connection to the storage server in stance.
V\$SSVR_FLASHCACHE	Displays information of flashcaches used by the storage server in stance.
V\$SSVR_GRID_DISK	Displays information of grid disks.
V\$SSVR_IOLOAD	IO load of storage server
V\$SSVR_IORM_CATEGORY_PLAN	Category Plan List used by the storage server instance
V\$SSVR_IORM_DB_PLAN	DB Plan List used by the storage server instance
V\$SSVR_IOSTAT	IO stat per sec of storage server
V\$SSVR_MEMSTAT	Memory stat of storage server
V\$SSVR_SLAB_STAT	used buffer slab information of storage server
V\$SSVR_STORAGE_DISK	Displays information of storage disks used by the storage server instance.
V\$STANDBY	Displays information on the database duplication in the RDBMS Standby Cluster.
V\$STANDBY_DEST	Displays information on the standby DB in the RDBMS Standby Cluster.
V\$STANDBY_STATUS	Displays information on log duplication of the primary DB in the RDBMS Standby Cluster.
V\$STATNAME	Displays the detailed information on the statistics event.
V\$SYSSTAT	Displays statistics of a system.
V\$SYSSTAT_VALUE	Displays values for getting statistics of a system.
V\$SYSTEM_EVENT	Displays events performing in the system.
V\$SYSTEM_PARAMETERS	Displays system parameter values.
V\$SYS_TIME_MODEL	Displays the system-level time statistics.
V\$TABLESPACE	Displays information on tablespaces.
V\$TACSTAT	Displays statistics of a TAC.
V\$TEMPFILE	Displays temporary files in the database.
V\$TEMPSEG_OP_USAGE	Displays temporary segments usage in the server.
V\$TEMPSEG_USAGE	Displays temporary segments in the server.

Dynamic View	Description
V\$TEMPSTAT	Displays statistics of file I/O.
V\$THR_ACT_INFO	Displays information on activities of the threads.
V\$THR_EVENT	Displays events that are performed in each thread.
V\$TIMER	Displays information on the system timer.
V\$TIMEZONE_NAMES	Displays timezone names.
V\$TRANSACTION	Displays ongoing transactions.
V\$TSN_TIME	Displays the mapping table of TSN and time.
V\$UNDOSTAT	Displays statistics of Undo storage.
V\$UNDO_FREE_SPACE	Displays free space in block count for each UNDO tablespace.
V\$USGMT_TXENTRY	Displays undo segment transaction entry information.
V\$VERSION	Displays RDBMS version information.
V\$WAITER_SESSION	Displays information on the sessions that wait for a lock acquisition
V\$WAITSTAT	Displays information on block wait events for each block type and class
V\$WAITUSE_STAT	Displays information on block wait events
V\$WAITUSE_THR_STAT	Displays information on block wait events for each block type, class, and pin usage

4.2.1. V\$ACCESS

Displays information for the objects that the session is accessing.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
OWNER	VARCHAR(128)	Owner of the object
OBJECT	VARCHAR(128)	Name of the object
TYPE	VARCHAR(23)	Type of the object

4.2.2. V\$ACTIVE_SESSION_HISTORY

Displays information on the active session history. To enable ACTIVE_SESSION_HISTORY, TO TAL_SHM_SIZE needs to be greater than 2GB.

- Columns

Column Name	Data Type	Description
SAMPLE_ID	NUMBER	Sample ID
THREAD#	NUMBER	Thread#
SAMPLE_TIME	DATE	Sample Time
SID	NUMBER	Session ID
SESS_SERIAL_NO	NUMBER	A serial number of a session
USER_NO	NUMBER	The user's ID
WAIT_EVENT	NUMBER	Type of the wait event which the session waits
ID1	NUMBER	First Parameter
ID2	NUMBER	Second Parameter
WE_SEQ	NUMBER	Sequence# of the Wait Event
TIME_WAITED	NUMBER	The amount of time waited for this event (msec)
WAIT_OBJ_ID	NUMBER	ID of the object which the session waits
WAIT_FILE_NO	NUMBER	Number of the file which the session waits
WAIT_BLOCK_NO	NUMBER	Number of the block which the session waits
WAIT_ROW_NO	NUMBER	Number of the row which the session waits
USGMT_ID	NUMBER	USGMT number at the time of sampling
SLOTNO	NUMBER	Slot number at the time of sampling
WRAPNO	NUMBER	Wrap number at the time of sampling
SQL_ID	VARCHAR(13)	SQL identifier
SQL_CHILD_NUMBER	NUMBER	The number of this child physical plan

Column Name	Data Type	Description
CURR_HASHVAL	NUMBER	SQL hash value
MODULE_NAME	VARCHAR(64)	Name of a module specified by dbms_application_info.set_module
ACTION_NAME	VARCHAR(64)	Name of an action specified by dbms_application_info.set_module/action
CLIENT_INFO_NAME	VARCHAR(64)	Name of client_info specified by dbms_application_info.set_client_info
PROG_NAME	VARCHAR(30)	Client program name
SQL_EXEC_START	DATE	The time when the execution started.
SQL_EXEC_ID	NUMBER	Execution identifier. It is necessary to identify multiple simultaneous SQL executions. To identify a single SQL execution, three columns; SQL_ID, SQL_EXEC_START, and SQL_EXEC_ID must be defined. The three column values are used to match with corresponding rows in the V\$SQL_MONITOR.
SQL_PLAN_LINE_ID	NUMBER	Identifier of the plan operation
PORT	NUMBER	Client port number
DELTA_TIME	NUMBER	Time interval (in seconds) since the last time this session was sampled or created.
DELTA_PHY_READ_BKLS	NUMBER	The number of blocks read from disk over the last DELTA_TIME seconds
DELTA_PHY_WRITE_BKLS	NUMBER	The number of blocks written to disk over the last DELTA_TIME seconds
DELTA_LOG_READ_BKLS	NUMBER	The number of blocks read over the last DELTA_TIME seconds
PGA_SIZE	NUMBER	The amount of PGA memory consumed by this session

4.2.3. V\$ALL_FILESTAT

Displays statistics of data file and temp file I/O.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	File number
TEMPFILE	CHAR(1)	Whether this is tempfile
PHYRDS	NUMBER	The number of reading times
PHYWRTS	NUMBER	The number of writing times
PHYBLKRD	NUMBER	The number of read blocks
PHYBLKWRT	NUMBER	The number of written blocks
SINGLEBLKRDS	NUMBER	The number of times of reading a single block
READTIM	NUMBER	Reading time (msec)
WRITETIM	NUMBER	Writing time (msec)
SINGLEBLKRDTIM	NUMBER	Time for which a single block was read (msec)
AVGIOTIM	NUMBER	Average I/O time (msec)
LSTIOTIM	NUMBER	Last I/O time (msec)
MINIOTIM	NUMBER	Shortest I/O time (msec)
MAXIORTM	NUMBER	Longest reading time (msec)
MAXIOWTM	NUMBER	Longest writing time (msec)

4.2.4. V\$ARCHIVED_LOG

Displays archive log information.

- Columns

Column Name	Data Type	Description
RECID	NUMBER	Archive log record ID

Column Name	Data Type	Description
THREAD#	NUMBER	Log group number recorded by instances of a server
NAME	VARCHAR(256)	Archive log file path and name
SEQUENCE#	NUMBER	Sequence number of the log group
FIRST_CHANGE#	NUMBER	TSN associated with the first archive log that belongs to the log group
FIRST_TIME	DATE	Time when the first archive log that belongs to the log group was recorded
NEXT_CHANGE#	NUMBER	TSN associated with the next archive log that belongs to the log group
RESET LOGS_CHANGE#	NUMBER	Resetlogs TSN of the database when the log was written
RESETLOGS_TIME	DATE	Resetlogs time of the database when the log was written
FILESIZE	NUMBER	Size of logfile in bytes
BLOCKS	NUMBER	Number of blocks in logfile
BLOCK_SIZE	NUMBER	Size of log block

4.2.5. V\$ARCHIVE_DEST_FILES

Displays archive log information for archive log files in LOG_ARCHIVE_DEST.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(256)	Archive log file path and name
THREAD#	NUMBER	Log group number recorded by instances of a server
SEQUENCE#	NUMBER	Sequence number of the log group
FIRST_CHANGE#	NUMBER	TSN associated with the first archive log that belongs to the log group

Column Name	Data Type	Description
FIRST_TIME	DATE	Time when the first archive log that belongs to the log group was recorded
NEXT_CHANGE#	NUMBER	TSN associated with the next archive log that belongs to the log group
RESET LOGS_CHANGE#	NUMBER	Resetlogs TSN of the database when the log was written
RESETLOGS_TIME	DATE	Resetlogs time of the database when the log was written

4.2.6. V\$AS_ALIAS

All Aliases in all disk spaces mounted by the AS instance.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(48)	File Alias(File Name String)
DISKSPACE_NUMBER	NUMBER	Disk space number that the alias belongs to
FILE_NUMBER	NUMBER	File number for the alias
FILE_INCARNATION	NUMBER	File incarnation number for the alias
ALIAS_INCARNATION	NUMBER	Alias incarnation number

4.2.7. V\$AS_DISK

All disks discovered by the AS instance.

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Disk space number that the disk belongs to
DISK_NUMBER	NUMBER	Disk number in the disk space
STATE	VARCHAR(16)	Disk state in the disk space

Column Name	Data Type	Description
		- ONLINE - PREPARE_ADD - PREPARE_DROP - ADDING - DROPPING - SYNC - FAIL
OS_MB	NUMBER	Disk size recognized by the OS
TOTAL_MB	NUMBER	Disk size
FREE_MB	NUMBER	Unused disk space
NAME	VARCHAR(48)	Disk name
FAILGROUP	VARCHAR(48)	Name of the failure group that the disk belongs to
PATH	VARCHAR(256)	Absolute path of the disk
CREATE_DATE	DATE	Date when the disk was added to the disk space

4.2.8. V\$AS_DISKSPACE

All disk spaces discovered by the AS instance.

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Number assigned to the disk space
NAME	VARCHAR(48)	Name of the disk space
SECTOR_SIZE	NUMBER	Physical block size (in bytes)
BLOCK_SIZE	NUMBER	AS metadata block size (in bytes)
ALLOCATION_UNIT_SIZE	NUMBER	Size of the allocation unit (in bytes)

Column Name	Data Type	Description
STATE	VARCHAR(16)	State of the disk space on the AS instance - ASSIGNED - MOUNTING - CREATING - MOUNT
TYPE	VARCHAR(8)	Redundancy level of the disk space - EXTERN - NORMAL - HIGH
TOTAL_MB	NUMBER	Total capacity of the disk space
FREE_MB	NUMBER	Unused capacity of the disk space
REQUIRED_MIRROR_FREE_MB	NUMBER	Required free capacity of the disk space for disk failure
USABLE_FILE_MB	NUMBER	Usable capacity of the disk space

4.2.9. V\$AS_EXTENT_MAP

Extent map of each file in each disk space

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Disk space number that the file belongs to
FILE_NUMBER	NUMBER	File number in the disk space
EXTENT_NUMBER	NUMBER	Extent number in the file
REDUN_NUMBER	NUMBER	Redundancy number of the extent - 0 primary - 1, 2 redun copy

Column Name	Data Type	Description
EXTENT_SIZE	NUMBER	# of AUs in the extent
DISK_NUMBER	NUMBER	Disk number in the disk space
AU_NUMBER	NUMBER	AU number in the disk

4.2.10. V\$AS_FILE

All files in all disk spaces mounted by the AS instance.

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Disk space number that the file belongs to
FILE_NUMBER	NUMBER	File number in the disk space
INCARNATION	NUMBER	File incarnation number
BLOCK_SIZE	NUMBER	Block size of the file (in bytes)
BYTES	NUMBER	Number of bytes of the file
TYPE	VARCHAR(64)	File type - DATA - CTRL - CM
REDUNDANCY	VARCHAR(8)	Redundancy level of the file - EXTERN - NORMAL - HIGH
STRIPED	VARCHAR(8)	Striping type - COARSE - FINE

4.2.11. V\$AS_OPERATION

Ongoing operations in each disk space

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Disk space number that the operation belongs to
OPERATION	VARCHAR(16)	Type of the operation
STATE	VARCHAR(8)	State of the operation
POWER	NUMBER	Power requested for the operation
JOB_DONE	NUMBER	# of extents that have been processed so far
JOB_REMAIN	NUMBER	# of remained extents that have to be processed
JOB_TOTAL	NUMBER	# of extents that have to be processed by the operation
EST_SPEED	NUMBER	extents processed divided by elapsed time
EST_REMAIN_TIME	VARCHAR(32)	job_total divided by ext_speed

4.2.12. V\$AS_USER

All users in all disk spaces mounted by the AS instance.

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Disk space number that the file belongs to
USER_NUMBER	NUMBER	User number in the disk space
INCARNATION	NUMBER	User incarnation number
USER_NAME	VARCHAR(128)	User name

4.2.13. V\$AS_USERGROUP

All usergroups in all disk spaces mounted by the AS instance.

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Disk space number that the file belongs to
USERGROUP_NUMBER	NUMBER	Usergroup number in the disk space
INCARNATION	NUMBER	Usergroup incarnation number
OWNER_NUMBER	NUMBER	Owner number of the usergroup
OWNER_INCARNATION	NUMBER	Owner incarnation number
USERGROUP_NAME	VARCHAR(128)	Usergroup name

4.2.14. V\$AS_USERGROUP_MEMBER

Each group members in all disk spaces mounted by the AS instance.

- Columns

Column Name	Data Type	Description
DISKSPACE_NUMBER	NUMBER	Disk space number that the file belongs to
MEMBER_NUMBER	NUMBER	Member number in the usergroup
MEMBER_INCARNATION	NUMBER	Member incarnation number
USERGROUP_NUMBER	NUMBER	Usergroup number
USERGROUP_INCARNATION	NUMBER	Usergroup incarnation number

4.2.15. V\$AUTO_COALESCE

Displays statistics of an index auto coalesce operations

- Columns

Column Name	Data Type	Description
BUCKET#	NUMBER	Hash bucket number of the coalescing request list
SGMT_ID	NUMBER	Segment ID of the index to be automatically coalesced
COAL_REQ_CNT	NUMBER	Total number of the coalescing requests
COAL_CNT	NUMBER	Total number of the coalescing operations

4.2.16. V\$BACKUP

Displays the status of online backup.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	File number
STATUS	VARCHAR(10)	Status information - Active: online backup is being performed - Not Active : online backup is not being performed
CHANGE#	NUMBER	TSN for which backup is started if online backup is being performed
TIME	DATE	Time when the backup was started if online backup is being performed

4.2.17. V\$BACKUP_ARCHIVED_LOG

Displays information of backup archive logs.

- Columns

Column Name	Data Type	Description
SET_ID	NUMBER	Id of backup archivelogs
THREAD#	NUMBER	Log group number recorded by instances of a server
MIN_LOG_TIME	DATE	Minimum begin time of backup archivelogs
MAX_LOG_TIME	DATE	Maximum end time of backup archivelogs
MIN_LOG_TSN	NUMBER	Minimum begin TSN of backup archivelogs
MAX_LOG_TSN	NUMBER	Maximum end TSN of backup archivelogs
MIN_LOG_SEQ	NUMBER	Minimum sequence of backup archivelogs
MAX_LOG_SEQ	NUMBER	Maximum sequence of backup archivelogs
RESETLOG_TIME	DATE	Resetlog time of backup archivelogs
RESETLOG_TSN	NUMBER	Resetlog TSN of backup archivelogs

4.2.18. V\$BACKUP_SET

Displays information of backup sets.

- Columns

Column Name	Data Type	Description
SET_ID	NUMBER	Id of backup set
START_TIME	DATE	Begin time of backup
FINISH_TIME	DATE	End time of backup
START_TSN	NUMBER	Start TSN of backup
FINISH_TSN	NUMBER	Finish TSN of backup
RESETLOGS_TSN	NUMBER	Resetlogs TSN of backup
BASE_SET	NUMBER	Base set of backup
SIZE	NUMBER	Size of backup set

Column Name	Data Type	Description
IS_PARTIAL	VARCHAR(10)	Type of backup
IS_INCREMENTAL	VARCHAR(10)	Type of backup
WITH_ARCHIVELOG	VARCHAR(10)	Backed up with archive logs required for point in time recovery

4.2.19. V\$BACKUP_SET_TABLESPACE

Displays information of backup tablespace

- Columns

Column Name	Data Type	Description
SET_ID	NUMBER	Id of backup set
TSID	NUMBER	Tablespace ID

4.2.20. V\$BG_SESSION

Displays information on each background session.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
STATUS	VARCHAR(32)	Status of session - READY: The session is connected - RUNNING: The session is running - TX_RECOVERING: The transaction is being recovered - SESS_CLEANUP: The session resources are being cleaned up - ASSIGNED: Connected to database, but the session is closed
TYPE	VARCHAR(15)	Session type

Column Name	Data Type	Description
		- WTHR: Working thread - CTHR: Control thread - LGWR: Log writing process - CKPT: Checkpoint process - LARC: Log archive - AGENT: Sequence process - MTHR: Monitoring process - DBWR: Datablock writing process - LNW: Log network writing process
STATE	VARCHAR(25)	State of working thread - INVALID: Not intialized - NEW: Being created - IDLE: Ready to run - RUNNING: Running - WAITING: Waiting for internal messsage - RECV_WAITING: Waiting for client message - STOP_BY_MTHR: Stopped by MTHR - DEAD: Dead
WLOCK_WAIT	VARCHAR(18)	Type of wlock for which the session waits
WAIT_EVENT	NUMBER	Type of wait_event for which the session waits
WAIT_TIME	NUMBER	Waiting time of wait_event for which the session waits
PGA_USED_MEM	NUMBER	The amount of PGA memory occupied by the session
PID	NUMBER	Index of a process to which a session belongs
WTHR_ID	NUMBER	Index of a working thread process to which a session belongs
OSUSER	VARCHAR(128)	OS account name of the session connected

4.2.21. V\$BG_SESSTAT

Displays statistics of each background session.

- Columns

Column Name	Data Type	Description
TID	NUMBER	Session ID
STAT#	NUMBER	Number of event to obtain statistics
NAME	VARCHAR(60)	Name of event to obtain statistics
CLASS	NUMBER	Class of the event
VALUE	NUMBER	Value of the event (Corresponding to the event name)

4.2.22. V\$BH

Displays information for all buffers.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	Absolute number of the file
BLOCK#	NUMBER	Block number
BLKTYPE	NUMBER	Type of the block
STATUS	VARCHAR(7)	Status of the buffer - READING - CURRENT - CR
PIN_MODE	VARCHAR(3)	Pin mode
TEMP	VARCHAR(1)	Whether it is a buffer of the temporary file or not
DIRTY	VARCHAR(1)	Whether it is a modified buffer or not
TS#	NUMBER	ID of the tablespace to which the block corresponding to the buffer belongs

Column Name	Data Type	Description
OBJD	NUMBER	ID of the segment to which the block corresponding to the buffer belongs

4.2.23. V\$BLOCKER_SESSION

Displays blocker sessions which are not blocked by other session.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID of the blocker session
TYPE	VARCHAR(25)	Type of the lock
ID1	NUMBER	First ID of the lock
ID2	NUMBER	Second ID of the lock
MODE_HELD	NUMBER	Mode in which the lock is held

4.2.24. V\$BPARAMETERS

Views the value of the parameter set in BTIP.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(64)	Name of the parameter.
VALUE	VARCHAR(1024)	Value of the parameter.

4.2.25. V\$BUFFER_CACHE_ADVICE

Display the estimate hit ratios

- Columns

Column Name	Data Type	Description
BUFFER_CACHE_SIZE	NUMBER	The buffer cache size (in Mbytes)
HIT_RATIO	NUMBER	The estimate hit ratio at given buffer cache size

4.2.26. V\$BUFFER_POOL

Displays information for buffer pools.

- Columns

Column Name	Data Type	Description
ID	NUMBER	Buffer pool ID
NAME	VARCHAR(7)	Name of the buffer pool
BLOCK_SIZE	NUMBER	Size of the block
BUFFERS	NUMBER	The number of the buffers
WSCNT	NUMBER	The number of the working sets of the buffers pool

4.2.27. V\$BUFFER_POOL_STATISTICS

Displays statistics of buffer pools.

- Columns

Column Name	Data Type	Description
WS#	NUMBER	Working set number of the buffer pool
TOTAL_CNT	NUMBER	The total number of blocks in the working set
MAIN_CNT	NUMBER	The number of main lists
MAIN2_CNT	NUMBER	The number of the second main lists
AUX_CNT	NUMBER	The number of the auxiliary lists
HOT_CNT	NUMBER	The number of the most frequently used buffers

Column Name	Data Type	Description
CR_CNT	NUMBER	The number of the buffers read in the Consistent-Read mode
EXL_CNT	NUMBER	The number of buffers being modified
SHR_CNT	NUMBER	The number of buffers being scanned
DIRTY_CNT	NUMBER	The number of the modified buffers
SUM_GOT	NUMBER	The total number of buffers gotten by the working set
SUM_WRITE	NUMBER	The total number of the buffers modified by the working set
SUM_READ	NUMBER	The total number of the buffers scanned by the working set
FREE_WAIT	NUMBER	The number of times it waited for a free buffer
WRITE_WAIT	NUMBER	The number of times it waited to write data to disk
BUSY_WAIT	NUMBER	The number of times it waited for the busy buffer
FREE_SCAN	NUMBER	The number of times a free buffer is scanned
MAIN2_SCAN	NUMBER	The number of times the second main list is scanned

4.2.28. V\$CHECKPOINT

Displays information for checkpoints.

- Columns

Column Name	Data Type	Description
ONGOING	NUMBER	Whether a checkpoint is activated or not - 0: Checkpoint is not activated - 1: Checkpoint is activated
REQ_TYPE	VARCHAR(100)	The reason the checkpoint is activated
WAITERS	NUMBER	The number of waiters waiting for checkpoint to complete

Column Name	Data Type	Description
MIN_WAIT_TSN	NUMBER	The smallest TSN among the target TSNs waiting for checkpoint to complete
TARGET_TSN	NUMBER	The target TSN of the checkpoint that is ongoing or has recently completed (A checkpoint gets completed when the target TSN is bigger than LOW_CACHE_TSN)
LOW_CACHE_TSN	NUMBER	TSN for which the current checkpoint is valid
MAX_TIME	NUMBER	The longest amount of time needed to complete check point
MAX_BLOCKS	NUMBER	The maximum number of blocks used by checkpoint
CHECKPOINT_TSN	NUMBER	TSN of the current checkpoint

4.2.29. V\$CLUSTER_INTERCONNECTS

Displays interconnects available for use in cluster communication.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(15)	Name of the interconnect
IP_ADDRESS	VARCHAR(16)	IP address of the interconnect
IS_PUBLIC	VARCHAR(4)	Type of interface:public or private. Currently, it supports only private so is always set to NO.
SOURCE	VARCHAR(31)	Indicates where this interface was picked up from. Currently, it is always set to 'the local_cluster_addr parameter'

4.2.30. V\$CONTEXT

Displays context attributes in the current session.

- Columns

Column Name	Data Type	Description
NAMESPACE	VARCHAR(128)	The namespace of the context attribute
ATTRIBUTE	VARCHAR(128)	The name of the attribute
VALUE	VARCHAR(65532)	The value of the attribute

4.2.31. V\$CONTROLFILE

Displays information for control files.

- Columns

Column Name	Data Type	Description
STATUS	NUMBER	Status information - 0: Normal - Negative: Error
NAME	VARCHAR(256)	Path name for the control file
BLKSIZE	NUMBER	The size of the control file block
BLOCKS	NUMBER	The number of blocks in the control file

4.2.32. V\$CORRUPT_XID

Displays transactions whose recovery is suspended.

- Columns

Column Name	Data Type	Description
XID	VARCHAR(65532)	ID of the suspended transaction

4.2.33. V\$DATABASE

Displays database status information.

- Columns

Column Name	Data Type	Description
DBID	NUMBER	Database identifier (Unique value specified when creating a database)
NAME	VARCHAR(40)	Name of the database (Name specified when creating a database)
CREATE_DATE	DATE	Creation date of the database
CURRENT_TSN	NUMBER	The current TSN of the database
OPEN_MODE	VARCHAR(10)	Open mode of the database - MOUNTED - RECOVERY - READ ONLY - READ WRITE - NOMOUNT
RESETLOG_TSN	NUMBER	TSN associated with the last resetlogs
RESETLOG_DATE	DATE	The last resetlogs time
PREV_RESET LOG_TSN	NUMBER	TSN associated with the previous resetlogs
PREV_RESET LOG_DATE	DATE	The previous resetlogs time
LOG_MODE	VARCHAR(12)	Archive log mode - ARCHIVELOG - NOARCHIVELOG
CKPT_TSN	NUMBER	TSN associated with the last checkpoint
CKPT_DATE	DATE	The last checkpoint time
CPU_NAME	VARCHAR(32)	The CPU type name
PLATFORM_NAME	VARCHAR(32)	The OS platform name
CPU_MODEL	VARCHAR(256)	The CPU model name
OS_UPTIME	VARCHAR(256)	The OS uptime info

4.2.34. V\$DATAFILE

Displays information for data files in the database.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	Datafile number
CREATE_TSN	NUMBER	TSN that created the datafile
CREATE_DATE	DATE	Datafile created time
TS#	NUMBER	Tablespace number to which the datafile belongs
RFILE#	NUMBER	Relative datafile number in the tablespace
STATUS	VARCHAR(7)	Status information of the datafile - OFFLINE: Datafile needs to be deleted - ONLINE: Datafile is in the normal state - RECOVER: Datafile needs to be recovered
ENABLED	CHAR(10)	File accessibility - DISABLED: Unable to read/write - READ ONLY: Readable only - READ WRITE: Readable and writable
CKPT_TSN	NUMBER	TSN associated with the last checkpoint
CKPT_DATE	DATE	The last checkpoint time
CREATE_BYTES	NUMBER	Size of the datafile at the time when it is created
NAME	VARCHAR(256)	Path name of the datafile

4.2.35. V\$DATAFILE_HEADER

Displays information of datafiles by extracting it from file headers.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	Datafile number
STATUS	VARCHAR(7)	Status of the datafile - OFFLINE - ONLINE
DBID	NUMBER	ID of the database to which the datafile belongs
DBNAME	VARCHAR(40)	Name of the database to which the datafile belongs
BLKSIZE	NUMBER	Size of the block
RECOVER	VARCHAR(3)	Media recovery necessity
FUZZY	VARCHAR(3)	Whether or not the datafile has been normally closed
CREATE_TSN	NUMBER	TSN that created the datafile
CREATE_DATE	DATE	Datafile created time
TABLESPACE_NAME	VARCHAR(128)	Name of the tablespace to which the datafile belongs
TS#	NUMBER	Tablespace number to which the datafile belongs
RFILE#	NUMBER	Tablespace relative datafile number
RESETLOGS_TSN	NUMBER	TSN associated with the last reset logs
RESETLOGS_DATE	DATE	The last resetlogs time
CKPT_TSN	NUMBER	TSN associated with the last checkpoint
CKPT_DATE	DATE	The last checkpoint time
CKPT_COUNT	NUMBER	Checkpoint count
FILESIZE	NUMBER	Size of the datafile
NAME	VARCHAR(256)	Path name of the datafile

4.2.36. V\$DBFILE

Displays datafile names in the database.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	Datafile number
NAME	VARCHAR(256)	Path name of the datafile

4.2.37. V\$DBLINK

Displays information for the open database links in the current session.

- Columns

Column Name	Data Type	Description
DB_LINK	VARCHAR(128)	Name of the database link
OWNER_ID	NUMBER	ID of the owner of the database link
OPEN_CURSORS	NUMBER	The number of cursors opened by the current database link
IN_TRANSACTION	VARCHAR(3)	Whether it is a database link that is accessed from the currently running transaction or other transactions
HETEROGENEOUS	VARCHAR(3)	Whether or not the remote database is RDBMS
COMMIT_POINT_STRENGTH	NUMBER	Commit point strength of the remote database

4.2.38. V\$DBLINK_STATUS

Displays gateway and remote session information for the open database links in each session.

- Columns

Column Name	Data Type	Description
SESS_ID	NUMBER	Session ID

Column Name	Data Type	Description
SERIAL#	NUMBER	A serial number of a session (Like SID, used to recognize sessions)
DB_LINK	VARCHAR(128)	Name of the database link
OWNER_ID	NUMBER	ID of the owner of the database link
GATEWAY_PID	NUMBER	PID of the gateway (in heterogeneous link)
GATEWAY_NAME	VARCHAR(128)	Process name of the gateway (in heterogeneous link)
GATEWAY_TID	NUMBER	TID (thread id) of the gateway (in heterogeneous link)
REMOTE_SESS_INFO	VARCHAR(32)	Remote session info

4.2.39. V\$DB_PIPES

Displays DBMS_PIPE information.

- Columns

Column Name	Data Type	Description
OWNERID	NUMBER	Owner id of a pipe.
NAME	VARCHAR(1000)	Pipe name.
TYPE	VARCHAR(7)	Pipe type(private or public).
PIPE_SIZE	NUMBER	Maximum size of pipe.

4.2.40. V\$ENCRYPTED_TABLESPACES

Displays information on encrypted tablespaces.

- Columns

Column Name	Data Type	Description
TS#	NUMBER	A serial number of tablespace
ENCRYPTIONALG	VARCHAR(7)	An encryption algorithm

Column Name	Data Type	Description
ENCRYPTEDTS	VARCHAR(3)	Whether or not the tablespace was encrypted (YES or NO)

4.2.41. V\$ENCRYPTION_WALLET

Displays information of the status of the wallet.

- Columns

Column Name	Data Type	Description
WRL_TYPE	VARCHAR(20)	Type of the wallet resource locator
WRL_PARAMETER	VARCHAR(4000)	Parameter of the wallet resource locator (absolute file name)
STATUS	VARCHAR(10)	Status of the wallet

4.2.42. V\$ENQUEUE_STAT

Displays statistics of locks.

- Columns

Column Name	Data Type	Description
IDX	NUMBER	Lock number
TYPE	VARCHAR(25)	Lock type
TOTAL_REQ#	NUMBER	Lock requested count
TOTAL_WAIT#	NUMBER	Lock wait count
SUCC_REQ#	NUMBER	Lock success count
FAILED_REQ#	NUMBER	Lock failure count
CUM_WAIT_TIME	NUMBER	Total Lock wait time (msec)

4.2.43. V\$EST_CHECKPOINT_TIME

Displays information for estimated checkpoint time.

- Columns

Column Name	Data Type	Description
DIRTY_BLOCKS	NUMBER	The number of dirty blocks in buffer cache
DISK_WRITE_TIME	NUMBER	The disk write time per block(ms)
ESTIMATED_CHECKPOINT_TIME	NUMBER	the estimated checkpoint time(s)

4.2.44. V\$EVENT_NAME

Displays event names.

- Columns

Column Name	Data Type	Description
EVENT#	NUMBER	Event number
NAME	VARCHAR(40)	Event name
CLASS	VARCHAR(40)	Class of the event
DESC	VARCHAR(60)	Description of the waitevent
ID1_DESC	VARCHAR(60)	Description of the first event parameter
ID2_DESC	VARCHAR(60)	Description of the second event parameter

4.2.45. V\$FILESTAT

Displays file read/write statistics.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	File number

Column Name	Data Type	Description
PHYRDS	NUMBER	The number of read operations performed
PHYWRTS	NUMBER	The number of write operations performed
PHYBLKRD	NUMBER	The number of blocks read
PHYBLKWRT	NUMBER	The number of blocks written
SINGLEBLKRDS	NUMBER	Single-block read count
READTIM	NUMBER	Time spent on read operations (msec)
WRITETIM	NUMBER	Time spent on write operations (msec)
SINGLEBLKRDTIM	NUMBER	Time spent to read a single-block (msec)
AVGIOTIM	NUMBER	Average input/output time (msec)
LSTIOTIM	NUMBER	Time spent on the last input/output operation (msec)
MINIOTIM	NUMBER	The minimum time spent on an input/output operation (msec)
MAXIORTM	NUMBER	The maximum time spent on a read operation (msec)
MAXIOWTM	NUMBER	The maximum time spent on a write operation (msec)

4.2.46. V\$GLOBAL_TRANSACTION

Displays information of the currently running global transactions.

- Columns

Column Name	Data Type	Description
GLOBAL_ID	VARCHAR(256)	ID of the global transaction
SESS_ID	NUMBER	ID of the current session
LOCAL_ID	VARCHAR(65532)	ID of the local transaction

4.2.47. V\$INSTANCE

Displays instance statuses.

- Columns

Column Name	Data Type	Description
INSTANCE_NUMBER	NUMBER	Instance number (Used by CM)
INSTANCE_NAME	VARCHAR(40)	Name of the instance
DB_NAME	VARCHAR(40)	Name of the database
HOST_NAME	VARCHAR(63)	Name of the host
PARALLEL	VARCHAR(3)	Whether clustering is activated or not
THREAD#	NUMBER	Log group number recorded by instances of a server
VERSION	VARCHAR(8)	Version of RDBMS
STARTUP_TIME	DATE	Instance startup time
STATUS	VARCHAR(16)	Current status of the server - NOMOUNT - MOUNT - NORMAL - RAISING_SVRMODE
SHUTDOWN_PENDING	VARCHAR(4)	Whether server shutdown was requested or not
TIP_FILE	VARCHAR(256)	Pathname of the TIP file

4.2.48. V\$INSTANCEMETRIC

Shows the load status of the current node in TAC.

- Columns

Column Name	Data Type	Description
BEGIN_TIME	DATE	Begin time for load calculations

Column Name	Data Type	Description
END_TIME	DATE	End time for load calculations
INTSIZE_CSEC	NUMBER	Interval length for load calculations (Unit: 0.01 seconds)
ELAPSEDPERCALL	NUMBER	Average processing time per user request within the interval
CPUPERCALL	NUMBER	Average CPU processing time per user request within the interval (currently not supported)
DBTIMEPERCALL	NUMBER	Average DB processing time per user request within the interval (currently not supported)
CALLSPERSEC	NUMBER	Number of user requests per second within the interval
DBTIMEPERSEC	NUMBER	The time consumed in DB per second within the interval (currently not supported)
GOODNESS	NUMBER	Load level of the interval (number of sessions or average processing time used)
DELTA	NUMBER	Load fluctuation predicated for additional sessions

4.2.49. V\$INSTANCEMETRIC_HISTORY

Shows the load status of the current node in TAC.

- Columns

Column Name	Data Type	Description
BEGIN_TIME	DATE	Begin time for load calculations
END_TIME	DATE	End time for load calculations
INTSIZE_CSEC	NUMBER	Interval size for load calculations (Unit: 0.01 Seconds)
ELAPSEDPERCALL	NUMBER	Average processing time per user request within the interval
CPUPERCALL	NUMBER	Average CPU processing time per user request within the interval (currently not supported)

Column Name	Data Type	Description
DBTIMEPERCALL	NUMBER	Average DB processing time per user request within the interval (currently not supported)
CALLSPERSEC	NUMBER	Number of user requests per second within the interval
DBTIMEPERSEC	NUMBER	The time consumed in DB per second within the interval (currently not supported)
GOODNESS	NUMBER	Load level of the interval (number of sessions or average processing time used)
DELTA	NUMBER	Load fluctuation predicated for additional sessions

4.2.50. V\$INTERCONNECT_LATENCY

Displays interconnect latency in cluster

- Columns

Column Name	Data Type	Description
REMOTE_INST_ID	NUMBER	Remote instance id
MIN_TIME	NUMBER	min time latency(us)
MAX_TIME	NUMBER	max time latency(us)
AVG_TIME	NUMBER	average time latency(us)
CUR_TIME	NUMBER	current time latency(us)

4.2.51. V\$INTERCONNECTION

Displays information of interconnection(s) in cluster

- Columns

Column Name	Data Type	Description
CONNECTION_ID	NUMBER	Connection ID
CONNECTION_NID	NUMBER	Remote instance node ID

Column Name	Data Type	Description
MSG_TO_SEND	NUMBER	Number of messages in send queue

4.2.52. V\$IPARAM_DESC

Displays initialization parameters.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(60)	Name of the initialization parameter
DESCRIPTION	VARCHAR(65532)	Description of the initialization parameter

4.2.53. V\$LATCH

Displays spinlock information.

- Columns

Column Name	Data Type	Description
LATCH#	NUMBER	Spinlock number
LEVEL#	NUMBER	Level of the spinlock
NAME	VARCHAR(30)	Name of the spinlock
GETS	NUMBER	The number of times a spinlock was acquired
MISSES	NUMBER	The number of times the requester had to wait for a spinlock
SPIN_GETS	NUMBER	The number of times the requester failed to acquire a spinlock but succeeded in gaining a spin
SLEEPS	NUMBER	The number of times the requester was put to sleep while waiting for a spinlock
IMMEDIATE_GETS	NUMBER	The number of times a trylock was acquired

Column Name	Data Type	Description
IMMEDIATE_MISSES	NUMBER	The number of times the requester failed to acquire a trylock
WAIT_TIME	NUMBER	The total sleep time of spinlock
SLEEPS_CNT	NUMBER	The number of actual sleep count while waiting for a spinlock

4.2.54. V\$LIBRARYCACHE

Displays information of PP cache and DD cache.

- Columns

Column Name	Data Type	Description
NAMESPACE	VARCHAR(16)	Name of the table - PP cache: set to "SQL AREA" - DD cache: set to the name of each DD table
GETS	NUMBER	Cache total access count
GETHITS	NUMBER	Cache hit count
GETHITRATIO	NUMBER	Cache hit ratio (%)
PINS	NUMBER	Number of times a PIN was requested for objects
PINHITS	NUMBER	Number of times objects was pinned
PINHITRATIO	NUMBER	Ratio of PINHITS to PINS

4.2.55. V\$LICENSE

Displays license information.

- Columns

Column Name	Data Type	Description
LICENSE_VERSION	VARCHAR(50)	Version of the license

Column Name	Data Type	Description
LICENSEE	VARCHAR(100)	User of the license
LICENSE_TYPE	VARCHAR(30)	Type of the license - DEMO - REAL
PRODUCT_NAME	VARCHAR(100)	Name of the product
PRODUCT_VERSION	VARCHAR(50)	Version of the product
EDITION	VARCHAR(30)	Type of product - BASE - STANDARD - ENTERPRISE
ISSUE_DATE	VARCHAR(10)	Issue date of the license
EXPIRE_DATE	VARCHAR(10)	Expiration date of the license (Only for the DEMO type of license)
LIMIT_USER	VARCHAR(10)	Limit for the number of users
LIMIT_CPU	VARCHAR(10)	Limit for the number of CPUs
HOST	VARCHAR(100)	Host (IP or host name)

4.2.56. V\$LOCK

Displays locks that are currently in use.

- Columns

Column Name	Data Type	Description
TYPE	VARCHAR(25)	Type of the Lock
ID1	NUMBER	The first ID of the Lock
ID2	NUMBER	The second ID of the Lock
LMODE	NUMBER	Mode that the Lock owner owns.

Column Name	Data Type	Description
		- 0: None - 1: Row-Shared(RS) - 2: Row-Exclusive(RX) - 3: Shared(S) - 4: Shared-Row-Exclusive(SRX) - 5: Exclusive(X) - 6: Pin (Special mode for TX-wait)
REQUESTED	NUMBER	Mode that the Lock waiter requests
SESS_ID	NUMBER	ID of the thread that owns the Lock(the same as SID)
CTIME	NUMBER	The amount of elapsed time (in seconds) in current mode

4.2.57. V\$LOG

Displays information of log groups.

- Columns

Column Name	Data Type	Description
THREAD#	NUMBER	Log group number recorded by instances of a server
GROUP#	NUMBER	Log group number
SEQUENCE#	NUMBER	Sequence number of the log group
BYTES	NUMBER	Size of the log group
MEMBERS	NUMBER	The number of log member files that belong to the log group
ARCHIVED	VARCHAR(3)	Whether it was archived or not
STATUS	VARCHAR(8)	Status information of the log group - ACTIVE: File archive needs to be done - UNUSED: The log file has not been used

Column Name	Data Type	Description
		- CURRENT: The log file is currently in use - INACTIVE: File archive has been completed
FIRST_CHANGE#	NUMBER	TSN associated with the first log that belongs to the log group
FIRST_TIME	DATE	Time when the first log that belongs to the log group was recorded

4.2.58. V\$LOGFILE

Displays information of log member files.

- Columns

Column Name	Data Type	Description
GROUP#	NUMBER	Log group number to which the log member file belongs.
STATUS	VARCHAR(7)	Status information of the log member file (Whether or not the log member file was deleted. Currently, it is always set to null.)
TYPE	CHAR(6)	Always ONLINE
MEMBER	VARCHAR(256)	Path name of the log member file

4.2.59. V\$LOG_HISTORY

Displays log history information.

- Columns

Column Name	Data Type	Description
THREAD#	NUMBER	Log group number recorded by instances of a server
SEQUENCE#	NUMBER	Sequence number of the log group
FIRST_CHANGE#	NUMBER	TSN associated with the first log that belongs to the log group

Column Name	Data Type	Description
FIRST_TIME	DATE	Time when the first log that belongs to the log group was recorded
NEXT_CHANGE#	NUMBER	TSN associated with the next log that belongs to the log group
NEXT_TIME	DATE	Time when the next log that belongs to the log group was recorded
RESET LOGS_CHANGE#	NUMBER	Resetlogs TSN of the database when the log was written
RESETLOGS_TIME	DATE	Resetlogs time of the database when the log was written
FILESIZE	NUMBER	Size of the logfile at the time of log switch

4.2.60. V\$MEDIA_RECOVERY_PROGRESS

Displays the progress of media recovery.

- Columns

Column Name	Data Type	Description
THREAD#	NUMBER	Log group number recorded by instances of a server
START_TIME	VARCHAR(19)	The time when media recovery began
CURRENT_TIME	VARCHAR(19)	Current time
ESTIMATE_TIME	VARCHAR(19)	Estimated finish time of the media recovery
BEGIN_SEQUENCE#	NUMBER	Sequence number of the log group where media recovery started
RECOVERY_SEQUENCE#	NUMBER	Sequence number of the log group that is currently being replayed
END_SEQUENCE#	NUMBER	Sequence number of the log group where media recovery would end for complete recovery

4.2.61. V\$METRIC

Displays information on the metric history.

- Columns

Column Name	Data Type	Description
SAMPLE_ID	NUMBER	Sample ID
THREAD#	NUMBER	Thread#
BEGIN_TIME	DATE	Begin Time of the Sample
END_TIME	DATE	End Time of the Sample
METRIC_ID	NUMBER	Metric ID
METRIC_NAME	VARCHAR(64)	Metric Name
VALUE	NUMBER	Value of the Metric
GROUP_ID	NUMBER	Group ID
GROUP_NAME	VARCHAR(64)	Group Name
INTERVAL	NUMBER	Interval of the Collection(Sec)

4.2.62. V\$METRICNAME

Displays specifications of the metrics.

- Columns

Column Name	Data Type	Description
METRIC_ID	NUMBER	Metric ID
METRIC_NAME	VARCHAR(64)	Metric Name
METRIC_UNIT	VARCHAR(64)	Descriptions of the Metric Unit
GROUP_ID	NUMBER	Group ID
GROUP_NAME	VARCHAR(64)	Group Name
INTERVAL	NUMBER	Interval of Metric Collection(Sec)

4.2.63. V\$MYSTAT

Displays statistics of the current session.

- Columns

Column Name	Data Type	Description
SID	NUMBER	ID of the session
STAT#	NUMBER	Event number used to obtain statistics
NAME	VARCHAR(60)	Name of the event used to obtain statistics
CLASS	NUMBER	Class of the event
VALUE	NUMBER	The number of times that the event was used

4.2.64. V\$OBJECT_USAGE

Displays statistics about index usage gathered from the database for the indexes owned by the current user.

- Columns

Column Name	Data Type	Description
OWNER_NAME	VARCHAR(128)	Name of user who has the object
INDEX_NAME	VARCHAR(128)	The name of the index that is monitored
TABLE_NAME	VARCHAR(128)	The name of the base table
MONITORING	VARCHAR(1)	Y or N
USED	VARCHAR(1)	Y or N
START_MONITORING	DATE	Start monitoring time in sys._object_usage.start_monitoring
END_MONITORING	DATE	End monitoring time in sys._object_usage.end_monitoring

4.2.65. V\$OPEN_CURSOR

Displays information for all open cursors for each session

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
CURSOR_ID	NUMBER	cursor ID
USER_NAME	VARCHAR(128)	Name of the current user
HASH_VALUE	NUMBER	Hash value of the SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
SQL_TEXT	VARCHAR(64)	SQL text of the open cursor
EXEC_TIME	NUMBER	Total working time performed on the cursor

4.2.66. V\$OSSTAT

Displays various OS statistics.

- Columns

Column Name	Data Type	Description
PID	NUMBER	Pid of process
NAME	VARCHAR(64)	Name of process
CPUTIME	NUMBER	CPU user time
CPUUSAGE	NUMBER	CPU usage in percentage

4.2.67. V\$OSSTAT2

Displays various OS statistics.

- Columns

Column Name	Data Type	Description
ID	NUMBER	Id of OS statistic
STAT_NAME	VARCHAR(64)	Name of OS statistic
COMMENTS	VARCHAR(512)	OS statistic comments
VALUE	NUMBER	OS statistic value
CUMULATIVE	VARCHAR(3)	Whether the statistic is cumulative('YES' or 'NO')

4.2.68. V\$PARAMETERS

Displays values of initialization parameters.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(64)	Name of an initialization parameter
VALUE	VARCHAR(1024)	Value of an initialization parameter
DFLT_VALUE	VARCHAR(1024)	Default Value of an initialization parameter

4.2.69. V\$PATCH

Displays list of patch files.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(32)	Name of patch file

4.2.70. V\$PE_PESPLAN

Displays elapsed time information of PES in the format of SQL execution plan.

- Columns

Column Name	Data Type	Description
Execution_Plan	VARCHAR(65532)	Execution plan and embedded PES statistics

4.2.71. V\$PE_PESSTAT

Displays statistics of each PES for parallel processing.

- Columns

Column Name	Data Type	Description
SQL_ID	VARCHAR(13)	SQL identifier
PEM_ID	NUMBER	PEM node ID
PROD_PPN_ID	NUMBER	PPN ID associated with the producer PES
PROD_PES_ID	NUMBER	Producer PES ID
CONS_PPN_ID	NUMBER	PPN ID associated with the consumer PES
CONS_PES_ID	NUMBER	Consumer PES ID
ELAPSED_TIME	NUMBER	Total elapsed time
SAMPLE_TIME	NUMBER	Time taken for sampling with the range mode

4.2.72. V\$PE_PROCESS

Displays statistics of each PES for parallel processing.

- Columns

Column Name	Data Type	Description
PEP_ID	NUMBER	PE process ID
OS_PID	NUMBER	PE process ID generated by OS
STATUS	VARCHAR(16)	The status of PE process
CTHR_TID	NUMBER	The control thread ID of PE process
QCSID	NUMBER	ID of a session working as a parallel coordinator

Column Name	Data Type	Description
QCSERIAL#	NUMBER	A serial number of a session working as a parallel coordinator (Like QCSID, used to recognize the session)
SQL_CNT	NUMBER	The count of processed SQLs plus the current sql after this process has been assigned
PENDING_MSG	VARCHAR(5)	A flag which indicates whether this process has a pending message from QC

4.2.73. V\$PE_SESSION

Displays sessions in parallel processing.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
SERIAL#	NUMBER	A serial number of a session (Like SID, used to recognize the session)
PEP_ID	NUMBER	ID of parallel execution process which this session belongs to
QCSID	NUMBER	ID of a session working as a parallel coordinator
QCSERIAL#	NUMBER	A serial number of a session working as a parallel coordinator (Like QCSID, used to recognize the session)
DEGREE	NUMBER	Parallel processing degree specified by server
REQ_DEGREE	NUMBER	Parallel processing degree requested by user

4.2.74. V\$PE_SYSSTAT

Displays statistics of parallel execution.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(64)	Name of a PE statistic - PEP allocation failure count (current) : The number of failure to allocate PEP for current parallel coordinators. This value is incremented at most once for each session. - PEP allocation failure count (accumulated) : The number of failure to allocate PEP for all parallel coordinators including nonexistent ones. This value is incremented at most once for each session.
VALUE	NUMBER	Value of the PE statistic

4.2.75. V\$PE_TQSTAT

Displays statistics of table queues for parallel processing.

- Columns

Column Name	Data Type	Description
PEM_ID	NUMBER	PEM node ID
TQ_ID	NUMBER	Table queue ID
SERVER_TYPE	VARCHAR(10)	The role of server thread - PRODUCER: Transfers a result row to another thread - CONSUMER: Receives a result row from another thread - RANGER: Determines the range in which a result row is transferred
NUM_ROWS	NUMBER	The number of processed rows
BYTES	NUMBER	The byte number of processed data
WAITS	NUMBER	The number of times of waiting
THREAD	VARCHAR(30)	Thread name

4.2.76. V\$PGASTAT

Displays statistics of PGA.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(64)	Name of a PGA statistic - Ex memory soft limit: The maximum amount of PGA memory that can be allocated for the entire working thread running for queries. The memory tuner within the RDBMS monitors the PGA memory usage of the entire thread and adjusts the value accordingly to ensure the value does not exceed the maximum limit. - Ex memory operation limit: The maximum amount of memory that can be allocated for a single working thread to use memory (Sort, Hash-Join, and so on) during query executions. The memory tuner within the RDBMS adjusts this value properly when distributing the available memory among a number of working threads simultaneously request memory. The sort and hash-join operation references this value to check whether the operation is possible with its allocated memory. And if not possible, it uses a temporary table space and executes the file I/O operation instead. - Total ex memory allocated: The total amount of PGA memory currently occupied by the entire working thread of RDBMS. - Total ex memory allocated (max): The highest total PGA memory usage it has ever reached after RDBMS boots. In turn, the system keeps the highest value of the 'Total ex memory allocated' item. - FIXED pga memory: The fixed amount of memory that the malloc function directly allocates from the system when booted. - ALLOCATED pga memory: The amount of memory allocated using the malloc function and managed by the allocator with the RDBMS. This may increase during the operation.

Column Name	Data Type	Description
		- USED pga memory (from ALLOCATED): The amount of 'ALLOCATED pga memory' currently occupied by server processes. This value must be either less than or equal to the value set in 'ALLOCATED pga memory'. And this value is equal to the sum of each 'pga_used_mem' item of the processes listed via v\$process. - Total workarea memory used: The total amount of memory allocated by the server for query processing. - Total workarea temporary segment used: The size of the temporary segments used for query processing.
VALUE	NUMBER	Value of the PGA statistic

4.2.77. V\$PROCESS

Displays processes and threads used in RDBMS.

- Columns

Column Name	Data Type	Description
PID	NUMBER	Thread ID
SPID	NUMBER	ID of process to which the thread belongs
NAME	VARCHAR(8)	Thread name
LATCHWAIT	VARCHAR(18)	Spinlock waiting time of thread (msec)

4.2.78. V\$PROXY_SQLTEXT

Displays texts of SQL statements that are remotely executed through the database link.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of the SQL statement

Column Name	Data Type	Description
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
ID	NUMBER	Number given to each job of a physical plan
LINK_NAME	VARCHAR(128)	Database link name
PIECE	NUMBER	Number given to each text of a split SQL statement
SQL_TEXT	VARCHAR(64)	Text of an SQL statement split into 64-byte texts

4.2.79. V\$PROXY_SQL_PARAM

Displays bind parameters of SQL statements that are remotely executed through the database link.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of the SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
ID	NUMBER	Number given to each job of a physical plan
BIND_NO	NUMBER	The order of binding in a proxy node
CLIENT_BIND_NO	NUMBER	The order of binding to all plans

4.2.80. V\$RECOVERY_FILE_STATUS

Displays the status of a file that is being recovered.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	A serial number of the file
NAME	VARCHAR(256)	The pathname of the file

Column Name	Data Type	Description
STATUS	CHAR(11)	The status of the file ("IN RECOVERY" signifies a fixed status)

4.2.81. V\$RECOVERY_PROGRESS

Displays recovery progress.

- Columns

Column Name	Data Type	Description
START_TIME	TIMESTAMP(6)	Start time of the recovery
END_TIME	TIMESTAMP(6)	End time of the recovery
TYPE	CHAR(20)	Recovery type
ITEM	VARCHAR(32)	Name of the recovery information - UNDO BLOCK COUNT - RECOVERY TIME REMAIN
UNITS	VARCHAR(32)	Unit of the value specified in ITEM column
AMOUNT	NUMBER	The amount currently recovered
TOTAL	NUMBER	Total amount to be recovered

4.2.82. V\$RECOVERY_STATUS

Displays the status of media recovery progress.

- Columns

Column Name	Data Type	Description
RECOVERY_FILES	NUMBER	Number of datafiles in media recovery
NEXT_START_TSN	NUMBER	TSN of the next redo log
MIN_CANCEL_TSN	NUMBER	The minimum number of TSNs to be the end point of incomplete media recovery

Column Name	Data Type	Description
RECO_TSN	NUMBER	TSN of the current redo log
REDO_THREADS	NUMBER	Number of redo threads needed in media recovery
INCOMPLETE	VARCHAR(1)	Whether or not the current media recovery mode is in complete - True: Incomplete media recovery - False: Complete media recovery
CANCEL_TSN	NUMBER	TSN specified to be the end-point of incomplete media recovery
CANCEL_DATE	DATE	End-point time of the incomplete media recovery

4.2.83. V\$RECOVER_FILE

Displays files which require media recovery.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	A serial number of a file
ONLINE	VARCHAR(7)	Online status of a file
ERROR	VARCHAR(200)	Error details of a file to be recovered
CHANGE#	NUMBER	TSN for which to start recovery
TIME	DATE	Time that the recovery should be started

4.2.84. V\$RESERVED_WORDS

Displays a list of all SQL keywords.

- Columns

Column Name	Data Type	Description
KEYWORD	VARCHAR(30)	Name of the keyword

Column Name	Data Type	Description
LENGTH	NUMBER	Length of the keyword
RESERVED	VARCHAR(1)	Whether or not the keyword cannot be used as an identifier

4.2.85. V\$RESULT_CACHE_DEPENDENCY

Displays the depends-on relationship between cached result and dependencies.

- Columns

Column Name	Data Type	Description
RESULT_ID	NUMBER	ID of the cached result
DEPEND_ID	NUMBER	ID of the dependency object
OBJECT_NO	NUMBER	Dictionary object number of the dependency object

4.2.86. V\$RESULT_CACHE_OBJECTS

Displays Result Cache Objects and their attributes.

- Columns

Column Name	Data Type	Description
ID	NUMBER	ID of the cached object
TYPE	VARCHAR(10)	Type of the cached object - Result - Dependency
STATUS	VARCHAR(9)	status of the object - New: Result is still under construction - Published: Result is available for use - Invalid: Result is no longer available for use
BUCKET_NO	NUMBER	Internal hash bucket of the object

Column Name	Data Type	Description
HASH	NUMBER	Hash value of the object
NAME	VARCHAR(512)	SQL prefix
NAMESPACE	VARCHAR(3)	Namespace (SQL or PSM)
CREATION_TIMES TAMP	DATE	Time when the object was created
CREATOR_UID	NUMBER	ID of the schema that created the object
DEPEND_COUNT	NUMBER	Number of dependencies or dependents
TSN	NUMBER	Build TSN or invalidation TSN
COLUMN_COUNT	NUMBER	Number of columns in the cached result
ROW_COUNT	NUMBER	Total number of rows in the cached result
PIN_COUNT	NUMBER	Number of active scans on this result
BUILD_TIME	NUMBER	Amount of time (in millisecond) it took to build the cached result
OBJECT_NO	NUMBER	Dictionary object number of the dependency object
INVALIDATIONS	NUMBER	Number of times the object has invalidated its dependents
SPACE_USED	NUMBER	Used space (in bytes) for the result
CACHE_ID	VARCHAR(512)	Cache ID for the result

4.2.87. V\$RESULT_CACHE_OBJECT_STATISTICS

Displays Result Cache Object statistics.

- Columns

Column Name	Data Type	Description
ID	NUMBER	ID of the cached object
NAME	VARCHAR(512)	SQL prefix

Column Name	Data Type	Description
NAMESPACE	VARCHAR(3)	Namespace (SQL or UDF)
SEARCH_COUNT	NUMBER	Total number of searches in the cached result
HIT_COUNT	NUMBER	Total number of hits in the cached result
HIT_RATIO	NUMBER	Ratio of hits in the cached result

4.2.88. V\$RESULT_CACHE_STATISTICS

Displays various Result Cache settings and usage statistics.

- Columns

Column Name	Data Type	Description
ID	NUMBER	Statistic number
NAME	VARCHAR(40)	Name of the statistic
VALUE	NUMBER	Value of the statistic

4.2.89. V\$ROLLSTAT

Displays statistics of Undo usage.

- Columns

Column Name	Data Type	Description
USN	NUMBER	Undo segment number
EXTENTS	NUMBER	The number of extents
RSSIZE	NUMBER	The size of Undo segment
SEQNO	NUMBER	Sequence number of undo segment
INCNO	NUMBER	The number of undo segment incarnation
XACTS	NUMBER	The number of transactions which are performing the assigned Undo segment

Column Name	Data Type	Description
HWMSIZE	NUMBER	The number of Undo blocks which were already used
SHRINKS	NUMBER	The number of times of shrinking Undo space
WRAPS	NUMBER	The number of times of reusing Undo space
EXTENDS	NUMBER	The number of times of extending Undo space
SHRINK_SIZE	NUMBER	The number of Undo blocks shrinking Undo space
ACTIVE_SIZE	NUMBER	The number of Undo blocks currently in use
STATUS	NUMBER	Status information ("ONLINE" signifies a fixed status)
CUREXT	NUMBER	Extent that is currently in use
CURSIZE	NUMBER	The size of extent currently in use
CURBLK	NUMBER	Block number in use by the current extent
MAX_ACTIVE_SIZE	NUMBER	The maximum number of blocks used by Undo segment

4.2.90. V\$ROWCACHE

Displays details of status information on DD cache.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(16)	DD table name
SEARCH_KEY	NUMBER	Search key value in DD cache
BUCKETSET_ID	NUMBER	Bucketset ID in the search key
ENTRY_CNT	NUMBER	The number of entries cached in the bucketset
HIT_CNT	NUMBER	The number of times that DD cache succeeded
MISS_CNT	NUMBER	The number of times that DD cache failed
CACHE_SIZE	NUMBER	The size of the bucketset (in bytes)

Column Name	Data Type	Description
PINNED_CNT	NUMBER	The number of entries pinned in the bucketset
INVALID_CNT	NUMBER	The number of invalid entries in the bucketset
NE_CNT	NUMBER	The number of entries for objects which do not exist in the bucketset

4.2.91. V\$RSBSTAT

Displays Stats of RSBs

- Columns

Column Name	Data Type	Description
CTX	CHAR(3)	Context (CCC, CWS)
MST_RSB	NUMBER	Count of Master RSBs
SHD_RSB	NUMBER	Count of Shadow RSBs
RECLAIMED	NUMBER	Accumulated Count of reclaimed RSBs
FAILED_BH	NUMBER	Accumulated Count of RSB reclamation failures (cached bh)
FAILED_USING	NUMBER	Accumulated Count of RSB reclamation failures (in use)
FAILED_GLOBAL	NUMBER	Accumulated Count of RSB reclamation failures (global rsb)
FAILED_PIN	NUMBER	Accumulated Count of RSB reclamation failures (pinned)
FAILED_INVALID	NUMBER	Accumulated Count of RSB reclamation failures (on invalid)

4.2.92. V\$RSRC_CONSUMER_GROUP

Displays data related to currently active resource consumer groups

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(32)	Name of the consumer group
ACTIVE_SESSIONS	NUMBER	Number of currently active sessions in the consumer group
CON SUMED_CPU_TIME	NUMBER	Cumulative amount of CPU time consumed by all sessions in the consumer group
YIELDS	NUMBER	Cumulative number of times that sessions in the consumer group had to yield CPU to other sessions because of quantum expiration
SMALL_READ_MEGABYTES	NUMBER	Number of single block megabytes read
LARGE_READ_MEGABYTES	NUMBER	Number of multiblock megabytes read
SMALL_READ_RE QUESTS	NUMBER	Number of single block read requests
LARGE_READ_RE QUESTS	NUMBER	Number of multiblock read requests

4.2.93. V\$RSRC_PLAN

Displays the names of all currently active resource plans

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(32)	Name of the resource plan
IS_TOP_PLAN	VARCHAR(5)	Indicates whether the resource plan is the current top plan

4.2.94. V\$RSRC_SESSION_INFO

Displays resource manager statistics per session

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session identifier
CURRENT_CONSUMER_GROUP	VARCHAR(32)	The name of the consumer group in which the session currently belongs
STATE	VARCHAR(32)	Current state of the session
CONSUMED_CPU_TIME	NUMBER	Cumulative amount of CPU time consumed by the session
YIELDS	NUMBER	Cumulative number of times the session had to yield CPU to other sessions due to quantum expiration
SMALL_READ_MEGABYTES	NUMBER	Total number of single block megabytes read by the session
LARGE_READ_MEGABYTES	NUMBER	Total number of multiblock megabytes read by the session
SMALL_READ_REQUESTS	NUMBER	Total number of single block read requests by the session
LARGE_READ_REQUESTS	NUMBER	Total number of multiblock read requests by the session

4.2.95. V\$RUNNING_JOBS

Displays information on running jobs.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID of the currently running job
JOB_ID	NUMBER	JOB ID of the currently running job
START_TIME	DATE	Start time of the job
FAILURE	NUMBER	Job failure count
INSTANCE	NUMBER	Instance name that started the currently running job

4.2.96. V\$RUNNING_JOBS_WITH_NAME

Displays information on running jobs with name.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID of the currently running job
JOB_ID	NUMBER	JOB ID of the currently running job
JOB_NAME	VARCHAR(100)	JOB name of the currently running job
START_TIME	DATE	Start time of the job
FAILURE	NUMBER	Job failure count
INSTANCE	NUMBER	Instance name that started the currently running job

4.2.97. V\$SEGMENT_STATISTICS

!!! No documentation yet !!!

- Columns

Column Name	Data Type	Description
ID	NUMBER	Object ID
NAME	VARCHAR(128)	Object name
TYPE	VARCHAR(20)	Object type
STATISTICS#	NUMBER	Segment Statistics Type
STATISTICS_NAME	VARCHAR(64)	Name of the Segment Statistics
VALUE	NUMBER	Value of the Segment Statistics

4.2.98. V\$SESSION

Displays information on each session.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
SERIAL#	NUMBER	A serial number of a session (Like SID, used to recognize sessions)
AUDSID	NUMBER	A secondary serial number of a session
USER#	NUMBER	The current user's ID
USERNAME	VARCHAR(128)	The current user's name
IPADDR	VARCHAR(21)	IP to which the user connects
COMMAND	NUMBER	Currently performing SQL type - 1: SELECT - 2: INSERT - 3: UPDATE - 4: DELETE - 5: CALL
STATUS	VARCHAR(32)	Status of session - READY: The session is ready - RUNNING: The session is running - TX_RECOVERING: The transaction is being recovered - SESS_CLEANUP: The session resources are being cleaned up - ASSIGNED: The session has an assigned thread, but is not ready yet - CLOSING: The session is being closed - ROLLING_BACK: The statement-level transaction of PE slave is rolling back.
SCHEMA#	NUMBER	The current schema ID
SCHEMANAME	VARCHAR(128)	The current schema name
TYPE	VARCHAR(15)	Session type

Column Name	Data Type	Description
		- WTHR: Working thread - CTHR: Control thread - LGWR: Log writing process - CKPT: Checkpoint process - LARC: Log archive - AGENT: Sequence process - MTHR: Monitoring process - DBWR: Datablock writing process - LNWR: Log network writing process
SQL_ID	VARCHAR(13)	ID of the currently running SQL
SQL_CHILD_NUMBER	NUMBER	Child number of the currently running SQL
PREV_SQL_ID	VARCHAR(13)	ID of the last executed SQL
PREV_CHILD_NUMBER	NUMBER	Child number of the last executed SQL
SQL_ET	NUMBER	Elapsed time (ms) of SQL that is being performed
LOGON_TIME	DATE	Logon time
STATE	VARCHAR(25)	State of working thread - INVALID: Not initialized - NEW: Being created - IDLE: Ready to run - RUNNING: Running - WAITING: Waiting for internal message - RECV_WAITING: Waiting for client message - STOP_BY_MTHR: Stopped by MTHR - DEAD: Dead
WLOCK_WAIT	VARCHAR(18)	Type of wlock for which the session waits
WAIT_EVENT	NUMBER	Type of wait_event for which the session waits

Column Name	Data Type	Description
WAIT_TIME	NUMBER	Waiting time of wait_event for which the session waits
PGA_USED_MEM	NUMBER	The amount of PGA memory occupied by the session
SQL_TRACE	VARCHAR(8)	Whether a session uses SQL trace
PROG_NAME	VARCHAR(30)	Client program name
CLIENT_PID	NUMBER	Client PID
PID	NUMBER	Identifier of a process to which a session belongs
WTHR_ID	NUMBER	Index of a worker thread to which a session belongs
OS_THR_ID	NUMBER	Identifier of thread generated from OS to which a session belongs
OSUSER	VARCHAR(128)	OS account name of the session connected
MACHINE	VARCHAR(64)	Host name of the session connected
TERMINAL	VARCHAR(16)	Terminal(tty) information of the session connected
MODULE	VARCHAR(64)	Name of a module specified by dbms_application_info.set_module
ACTION	VARCHAR(64)	Name of an action specified by dbms_application_info.set_module/action
CLIENT_INFO	VARCHAR(64)	Name of client_info specified by dbms_application_info.set_client_info
CLIENT_IDENTIFIER	VARCHAR(64)	Name of client ID specified by dbms_session.set_identifier
PDML_ENABLED	VARCHAR(3)	Parallel dml enabled, YES or NO
PDML_STATUS	VARCHAR(8)	Parallel dml status, FORCE, ENABLED or DISABLED
PDDL_STATUS	VARCHAR(8)	Parallel ddl status, FORCE, ENABLED or DISABLED
PQ_STATUS	VARCHAR(8)	Parallel query status, FORCE, ENABLED or DISABLED
ROW_WAIT_OBJ_ID	NUMBER	Object ID of the row that causes a lock when waiting for a row lock.

Column Name	Data Type	Description
ROW_WAIT_FILE_NO	NUMBER	File number of the row that causes a lock when waiting for a row lock.
ROW_WAIT_BLOCK_NO	NUMBER	Block number of the row that causes a lock when waiting for a row lock.
ROW_WAIT_ROW_NO	NUMBER	Number of row that causes a lock when waiting for a row lock.
CONSUMER_GROUP	VARCHAR(32)	The name of the consumer group in which the session currently belongs
CON SUMED_CPU_TIME	NUMBER	Cumulative amount of CPU time consumed by the session

4.2.99. V\$SESSION_EVENT

Displays events that are performed in each session.

- Columns

Column Name	Data Type	Description
TID	NUMBER	Session ID
IDX	NUMBER	Event number
NAME	VARCHAR(40)	Name of the event
CLASS	VARCHAR(40)	Class of the event
DESC	VARCHAR(60)	Description of the event
TOTAL_WAITS	NUMBER	Total number of event calls
TOTAL_TIMEOUTS	NUMBER	The number of times that a time-out occurred in an event
TIME_WAITED	NUMBER	The amount of time waited for this event (msec)
AVERAGE_WAIT	NUMBER	The average amount of time waited for this event (msec)
MAX_WAIT	NUMBER	The maximum amount of time waited for this event (msec)

4.2.100. V\$SESSION_IO

Displays input/output which occurred in each session.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
BLOCK_GETS	NUMBER	The number of times of reading blocks in Current mode
CONSISTENT_GETS	NUMBER	The number of times of reading blocks in Consistent Read (CR) mode
PHYSICAL_READS	NUMBER	The number of blocks read in the disk
BLOCK_CHANGES	NUMBER	The number of times of changing a buffer read in Current mode
CONSISTENT_CHANGES	NUMBER	The number of times of changing a buffer read in Consistent Read mode

4.2.101. V\$SESSION_LONGOPS

Displays status of sessions taking longer time than specified in LONGOPS_THRESHOLD_SEC seconds.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
SERIAL#	NUMBER	A serial number of a session (Like SID, used to recognize sessions)
USER_NAME	VARCHAR(128)	Name of the current user
WTHR_ID	NUMBER	Index of a working thread process to which a session belongs
SQL_ID	VARCHAR(13)	SQL identifier
SQL_PLAN_ID	NUMBER	SQL physical plan identifier
OPNAME	VARCHAR(128)	Name of the operation

Column Name	Data Type	Description
TARGET	VARCHAR(128)	Name of the target object
SOFAR	NUMBER	The work throughput done so far
TOTALWORK	NUMBER	The overall work throughput
UNITS	VARCHAR(128)	Unit of the work throughput
START_TIME	DATE	Start time of the session
ELAPSED_TIME	NUMBER	Total time for which a particular job has been performed (in milliseconds)
END_TIME	DATE	End time of the session

4.2.102. V\$SESSION_WAIT

Displays the waiting status of each session.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
NAME	VARCHAR(24)	Name of waiting event
ID1	NUMBER	ID1 of waiting target
ID2	NUMBER	ID2 of waiting target
SEQ#	NUMBER	Sequence of wait event
TIME_WAITED	NUMBER	Time for which an event was waiting (msec)
TIMEOUT	NUMBER	Time-out value (msec)

4.2.103. V\$SESSTAT

Displays statistics of each session.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
STAT#	NUMBER	Number of event to obtain statistics
NAME	VARCHAR(60)	Name of event to obtain statistics
CLASS	NUMBER	Class of the event
VALUE	NUMBER	Value of the event (Corresponding to the event name)

4.2.104. V\$SESS_TIME_MODEL

Displays the session-level time statistics.

- Columns

Column Name	Data Type	Description
SID	NUMBER	Session ID
STAT_ID	NUMBER	Identifier of a time statistics
STAT_NAME	VARCHAR(64)	Name of a time statistics
VALUE	NUMBER	Amount of time (in microseconds)

4.2.105. V\$SGA

Displays information on shared memory used in the database.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(40)	Name of shared memory space - SHARED MEMORY: Total shared memory size allocated during instance startup according to the value of TOTAL_SHM_SIZE. - FIXED MEMORY: Total fixed memory area size fixed for database buffers, redo buffers, etc.

Column Name	Data Type	Description
		- SHARED POOL MEMORY: Total/used shared pool size for various purposes. Memory is allocated on demand using a shared pool allocator specific to the purpose. The size of the allocators can be extended as long as the pool is available. - SHARED POOL ALLOCATORS (LC): Total/used memory size of the allocators for library cache memory. - SHARED POOL ALLOCATORS (DD): Total/used memory size of the allocators for data dictionary cache memory. - SHARED POOL ALLOCATORS (SLAB): Total/used memory size of the allocators for slab memory. - SHARED POOL ALLOCATORS (MISC): Total/used memory size of the allocators for miscellaneous memory. - SHARED POOL ALLOCATORS (Total): Total/used memory size of the allocators for all purposes. This size equals the sum of all allocator sizes. - Database Buffers: Total database buffer size allocated since instance startup according to the value of DB_CACHE_SIZE. - Redo Buffers: Total redo buffer size allocated during instance startup according to the value of LOG_BUFFER.
TOTAL	NUMBER	Size of shared memory space
USED	NUMBER	Usage of shared memory space

4.2.106. V\$SGASTAT

Displays information on the shared pool for a database, such as its purpose and how much of the shared pool is used.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(40)	Purpose for which shared pool is used
SIZE	NUMBER	Usage of shared pool

4.2.107. V\$SHP_ADVICE

Displays advice information on the shared pool for a database, such as a recommended shared pool size.

- Columns

Column Name	Data Type	Description
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4.2.108. V\$SPINUSE_STAT

Displays statistics of Spinlock.

- Columns

Column Name	Data Type	Description
LOCATION	VARCHAR(60)	Location of Spinlock
SLEEPS_CNT	NUMBER	The number of cases that a LOCK is possessed in LOCATION while sleeping to obtain Spinlock

4.2.109. V\$SQL

Displays details of a SQL child cursor execution.

- Columns

Column Name	Data Type	Description
SQL_ID	VARCHAR(13)	SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
HASH_VALUE	NUMBER	Hash value of the SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan

Column Name	Data Type	Description
FIRST_LOAD_TIME	DATE	Time that an SQL statement was first loaded
LAST_ACTIVE_TIME	DATE	Last time that statistics were collected
PARSING_USER_ID	NUMBER	Identifier of user that parsed an SQL statement for the first time
PARSING_SCHEMA_ID	NUMBER	Identifier of schema that parsed an SQL statement for the first time
MODULE	VARCHAR(64)	Name of module that had been set when an SQL statement was parsed for the first time
ACTION	VARCHAR(64)	Name of action that had been set when an SQL statement was first parsed
SQL_TEXT	VARCHAR(30000)	SQL text of the current cursor
IS_SHAREABLE	VARCHAR(1)	Indicates whether this child cursor can be shared
CPU_TIME	NUMBER	CPU time (microseconds)
ELAPSED_TIME	NUMBER	Total execution time
PARSE_CALLS	NUMBER	The number of parsing requests
ROWS_PROCESSED	NUMBER	Total number of processed rows
FETCHES	NUMBER	The number of fetching times
EXECUTIONS	NUMBER	The number of times executing an SQL statement
END_OF_FETCH_COUNT	NUMBER	The number of times this SQL statement was fully executed
PX_SERVERS_EXECUTIONS	NUMBER	The number of times executing parallel execution slaves
APPLICATION_WAIT_TIME	NUMBER	Total amount of application wait time
CONCURRENCY_WAIT_TIME	NUMBER	Total amount of concurrency wait time
CLUSTER_WAIT_TIME	NUMBER	Total amount of cluster wait time

Column Name	Data Type	Description
USER_IO_WAIT_TIME	NUMBER	Total amount of I/O wait time (by user)
DISK_READS	NUMBER	Disk read count
DIRECT_WRITES	NUMBER	Direct write count
BUFFER_GETS	NUMBER	Total number of buffers read in Consistent-Read mode
PHYSICAL_READ_REQUESTS	NUMBER	Disk read request count
PHYSICAL_READ_BYTES	NUMBER	Total number of bytes read from disks (in bytes)
PHYSICAL_WRITE_REQUESTS	NUMBER	Disk write request count
PHYSICAL_WRITE_BYTES	NUMBER	Total number of bytes write to disks (in bytes)
SORTS	NUMBER	The number of sorts performed
OBJECT_STATUS	VARCHAR(14)	Status of the cursor

4.2.110. V\$SQLAREA

Displays details of SQL statement execution.

- Columns

Column Name	Data Type	Description
SQL_ID	VARCHAR(13)	SQL identifier
HASH_VALUE	NUMBER	Hash value of the SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
LAST_ACTIVE_TIME	DATE	Last time that statistics were collected
FIRST_LOAD_TIME	DATE	Time that an SQL statement was first loaded
PARSING_USER_ID	NUMBER	Identifier of user that parsed an SQL statement for the first time

Column Name	Data Type	Description
PARS ING_SCHEMA_ID	NUMBER	Identifier of schema that parsed an SQL statement for the first time
MODULE	VARCHAR(64)	Name of module that had been set when an SQL state ment was parsed for the first time
ACTION	VARCHAR(64)	Name of action that had been set when an SQL state ment was first parsed
SQL_TEXT	VARCHAR(30000)	SQL text of the current cursor
CPU_TIME	NUMBER	CPU time (microseconds)
ELAPSED_TIME	NUMBER	Total execution time
PARSE_CALLS	NUMBER	The number of parsing requests
ROWS_PROCESSED	NUMBER	Total number of processed rows
FETCHES	NUMBER	The number of fetching times
EXECUTIONS	NUMBER	The number of times executing an SQL statement
END_OF_FETCH_COUNT	NUMBER	The number of times this SQL statement was fully exe cuted
PX_SERVERS_EXE CUTIONS	NUMBER	The number of times executing parallel execution slaves
APPLICA TION_WAIT_TIME	NUMBER	Total amount of application wait time
CONCURREN CY_WAIT_TIME	NUMBER	Total amount of concurrency wait time
CLUS TER_WAIT_TIME	NUMBER	Total amount of cluster wait time
USER_IO_WAIT_TIME	NUMBER	Total amount of I/O wait time (by user)
DISK_READS	NUMBER	Disk read count
DIRECT_WRITES	NUMBER	Direct write count
BUFFER_GETS	NUMBER	Total number of buffers read in Consistent-Read mode

Column Name	Data Type	Description
PHYSICAL_READ_REQUESTS	NUMBER	Disk read request count
PHYSICAL_READ_BYTES	NUMBER	Total number of bytes read from disks (in bytes)
PHYSICAL_WRITE_REQUESTS	NUMBER	Disk write request count
PHYSICAL_WRITE_BYTES	NUMBER	Total number of bytes write to disks (in bytes)
SORTS	NUMBER	The number of sorts performed

4.2.111. V\$SQLSTATS

Displays information on SQL statement execution.

- Columns

Column Name	Data Type	Description
SQL_TEXT	VARCHAR(1000)	First thousand characters of the SQL text
SQL_ID	VARCHAR(13)	SQL identifier
HASH_VALUE	NUMBER	Hash value of the SQL statement
LAST_ACTIVE_TIME	DATE	Last time that statistics were collected
LAST_ACTIVE_CHILD_ADDRESS	RAW(8)	Address of the child physical plan when the statistics were collected
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SHAREABLE_MEM	NUMBER	Total shared memory (in bytes) occupied by all child cursors
CPU_TIME	NUMBER	CPU time (microseconds)
ELAPSED_TIME	NUMBER	Total execution time (in microseconds)
PARSE_CALLS	NUMBER	The number of parsing requests

Column Name	Data Type	Description
ROWS_PROCESSED	NUMBER	Total number of processed rows
FETCHES	NUMBER	The number of fetching times
EXECUTIONS	NUMBER	The number of times executing an SQL statement
END_OF_FETCH_COUNT	NUMBER	The number of times this SQL statement was fully executed
PX_SERVERS_EXECUTIONS	NUMBER	The number of times executing parallel execution slaves
APPLICATION_WAIT_TIME	NUMBER	Total amount of application wait time
CONCURRENCY_WAIT_TIME	NUMBER	Total amount of concurrency wait time
CLUSTER_WAIT_TIME	NUMBER	Total amount of cluster wait time
USER_IO_WAIT_TIME	NUMBER	Total amount of I/O wait time (by user)
DISK_READS	NUMBER	Disk read count
DIRECT_WRITES	NUMBER	Direct write count
BUFFER_GETS	NUMBER	Total number of buffers read in Consistent-Read mode
PHYSICAL_READ_REQUESTS	NUMBER	Disk read request count
PHYSICAL_READ_BYTES	NUMBER	Total number of bytes read from disks (in bytes)
PHYSICAL_WRITE_REQUESTS	NUMBER	Disk write request count
PHYSICAL_WRITE_BYTES	NUMBER	Total number of bytes write to disks (in bytes)
SORTS	NUMBER	The number of sorts performed
DISK_READ_TIME	NUMBER	Total disk read time
TEMP_SEGMENT_READ_TIME	NUMBER	Total temp segment read time
TEMP_SEGMENT_WRITE_TIME	NUMBER	Total temp segment write time

4.2.112. V\$SQLTEXT

Displays texts of SQL statements belonging to the cursor.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
COMMAND_TYPE	NUMBER	Number code of SQL statement type - 0 : COMMAND_TYPE_NONE - 1 : COMMAND_TYPE_SELECT - 2 : COMMAND_TYPE_INSERT - 3 : COMMAND_TYPE_UPDATE - 4 : COMMAND_TYPE_DELETE - 5 : COMMAND_TYPE_MERGE - 6 : COMMAND_TYPE_CALL - 7 : COMMAND_TYPE_MAX
PIECE	NUMBER	Number given to each text of a split SQL statement
SQL_TEXT	VARCHAR(64)	Text of an SQL statement split into 64-byte texts

- See also

[V\\$SQLTEXT2](#)

[V\\$SQLTEXT_WITH_NEWLINES](#)

[V\\$SQLTEXT_WITH_NEWLINES2](#)

4.2.113. V\$SQLTEXT2

Displays texts of SQL statements belonging to the cursor.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
COMMAND_TYPE	NUMBER	Number code of SQL statement type - 0 : COMMAND_TYPE_NONE - 1 : COMMAND_TYPE_SELECT - 2 : COMMAND_TYPE_INSERT - 3 : COMMAND_TYPE_UPDATE - 4 : COMMAND_TYPE_DELETE - - 5 : COMMAND_TYPE_MERGE - 6 : COMMAND_TYPE_CALL - 7 : COMMAND_TYPE_MAX
PIECE	NUMBER	Number given to each text of a split SQL statement
SQL_TEXT	VARCHAR(30000)	Text of an SQL statement split into 65532-byte texts

- See also

[V\\$SQLTEXT](#)

[V\\$SQLTEXT_WITH_NEWLINES](#)

[V\\$SQLTEXT_WITH_NEWLINES2](#)

4.2.114. V\$SQLTEXT_WITH_NEWLINES

Displays texts of SQL statements belonging to the cursor, without removing newline characters or blank characters.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
COMMAND_TYPE	NUMBER	Number code of SQL statement type - 0 : COMMAND_TYPE_NONE - 1 : COMMAND_TYPE_SELECT - 2 : COMMAND_TYPE_INSERT - 3 : COMMAND_TYPE_UPDATE - 4 : COMMAND_TYPE_DELETE - 5 : COMMAND_TYPE_MERGE - 6 : COMMAND_TYPE_CALL - 7 : COMMAND_TYPE_MAX
PIECE	NUMBER	Number given to each text of a split SQL statement.
SQL_TEXT	VARCHAR(64)	Text of an SQL statement split into 64-byte texts

- See also

[V\\$SQLTEXT](#)

[V\\$SQLTEXT2](#)

[V\\$SQLTEXT_WITH_NEWLINES2](#)

4.2.115. V\$SQLTEXT_WITH_NEWLINES2

Displays texts of SQL statements belonging to the cursor, without removing newline characters or blank characters.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
COMMAND_TYPE	NUMBER	Number code of SQL statement type - 0 : COMMAND_TYPE_NONE - 1 : COMMAND_TYPE_SELECT - 2 : COMMAND_TYPE_INSERT - 3 : COMMAND_TYPE_UPDATE - 4 : COMMAND_TYPE_DELETE - 5 : COMMAND_TYPE_MERGE - 6 : COMMAND_TYPE_CALL - 7 : COMMAND_TYPE_MAX
PIECE	NUMBER	Number given to each text of a split SQL statement.
SQL_TEXT	VARCHAR(65532)	Text of an SQL statement split into 65532-byte texts

- See also

[V\\$SQLTEXT](#)

[V\\$SQLTEXT_WITH_NEWLINES](#)

[V\\$SQLTEXT2](#)

4.2.116. V\$SQL_BIND_CAPTURE

Displays the values of the captured bind variables from the current session

- Columns

Column Name	Data Type	Description
SQL_HASH_VALUE	NUMBER	The Hash value of the sql

Column Name	Data Type	Description
PLAN_HASH_VALUE	NUMBER	The Hash value of the physical plan
SQL_ID	VARCHAR(13)	The SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
USER_ID	NUMBER	The user id that performed the SQL
NAME	VARCHAR(128)	The name of the bind variable
POSITION	NUMBER	The position of the bind variable in the SQL
TYPE	NUMBER	The type number of the bind variable
TYPE_NAME	VARCHAR(128)	The type of the bind variable
PRECISION	NUMBER	The precision of the bind variable
SCALE	NUMBER	The scale of the bind variable
LENGTH	NUMBER	The length of the bind variable
TIME_CAPTURED	DATE	The time when the bind variable was captured
VALUE	VARCHAR(65532)	The value of the bind variable

4.2.117. V\$SQL_BIND_CAPTURE_ALL

Displays the values of the captured bind variables from all sessions

- Columns

Column Name	Data Type	Description
SQL_HASH_VALUE	NUMBER	The Hash value of the sql
PLAN_HASH_VALUE	NUMBER	The Hash value of the physical plan
SQL_ID	VARCHAR(13)	The SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
USER_ID	NUMBER	The user id that performed the SQL

Column Name	Data Type	Description
NAME	VARCHAR(128)	The name of the bind variable
POSITION	NUMBER	The position of the bind variable in the SQL
TYPE	NUMBER	The type number of the bind variable
TYPE_NAME	VARCHAR(128)	The type of the bind variable
PRECISION	NUMBER	The precision of the bind variable
SCALE	NUMBER	The scale of the bind variable
LENGTH	NUMBER	The length of the bind variable
TIME_CAPTURED	DATE	The time when the bind variable was captured
VALUE	VARCHAR(65532)	The value of the bind variable

4.2.118. V\$SQL_EXPC_INFO

Displays information about expression execution of a physical plan

- Columns

Column Name	Data Type	Description
SQL_ID	VARCHAR(13)	SQL identifier
BIND_PARAM_CNT	NUMBER	Number of bind parameters
BIND_TYPES	VARCHAR(65532)	Type of bind parameters
ALLOC_SIZE	NUMBER	Size of memory usage

4.2.119. V\$SQL_MONITOR

Shows the details of SQL statements that are currently being monitored or those that have been monitored through the real time SQL monitoring function.

- Columns

Column Name	Data Type	Description
STATUS	VARCHAR(19)	Shows the current execution state of the SQL statement. - EXECUTING: The SQL statement is currently being executed. - DONE(ERROR): The SQL statement generated a runtime error and was closed. - DONE(FIRST N ROWS): Execution completed before all rows were fetched. - DONE(ALL ROWS): Execution completed after all rows were fetched. - DONE: Completed execution of parallel slaves.
SQL_ID	VARCHAR(13)	SQL identifier
SQL_EXEC_START	DATE	The time when the execution started.
SQL_EXEC_ID	NUMBER	Execution identifier. Identifies multiple, simultaneous SQL executions. To specify a single SQL execution, three columns; SQL_ID, SQL_EXEC_START, and SQL_EXEC_ID must be defined.
SID	NUMBER	Session identifier
SESSION_SERIAL#	NUMBER	Session serial number
SQL_PLAN_HASH_VALUE	NUMBER	Hash value of the execution plan
PX_QCSID	NUMBER	For parallel execution slaves, this indicates the identifier of the query coordinator session.
PX_MAXDOP	NUMBER	For parallel execution coordinators, this indicates the maximum allocated DDP value.
PX_SERVERS_REQUESTED	NUMBER	For parallel execution coordinators, this indicates the number of requested parallel slaves.
PX_SERVERS_ALLOCATED	NUMBER	For parallel execution coordinators, this indicates the number of allocated parallel slaves.
PX_SERVER#	NUMBER	For parallel execution slaves, this indicates a logical number of slaves within a single parallel execution set.

Column Name	Data Type	Description
PX_SERVER_SET	NUMBER	Whether the parallel execution slave belongs to the producer set or the consumer set. (either 1 or 2)
PX_SERVER_GROUP	NUMBER	For parallel execution slaves, this indicates the logical group number when queries are performed by multiple query coordinators
MODULE	VARCHAR(48)	Name of a module specified by dbms_application_info.set_module
ACTION	VARCHAR(32)	Name of an action specified by dbms_application_info.set_module/action
CLIENT_INFO	VARCHAR(64)	Name of client_info specified by dbms_application_info.set_client_info
CLIENT_IDENTIFIER	VARCHAR(64)	Name of client identifier specified by dbms_session.set_identifier
PROGRAM	VARCHAR(48)	Client program name
WTHR_ID	NUMBER	Working thread identifier
USER#	NUMBER	The current user's identifier
USERNAME	VARCHAR(30)	The current user's name
SQL_TEXT	VARCHAR(2000)	Executed SQL statements (A maximum of 2000 characters)
IS_FULL_SQLTEXT	VARCHAR(1)	Whether the value saved in the SQL_TEXT column is a full or partial SQL statement.
ERROR_NUMBER	NUMBER	Error number when a runtime error occurs.
ERROR_MESSAGE	VARCHAR(256)	Error messages when a runtime error occurs.
PSM_ENTRY_OBJECT_ID	NUMBER	Object ID of the top-most PSM procedure or function on the stack.
PSM_ENTRY_SUBPROGRAM_ID	NUMBER	The subprogram identifier of the procedure or function that was called upon entry into the PSM execution.
PSM_OBJECT_ID	NUMBER	The object identifier of the current executed PSM

Column Name	Data Type	Description
PSM_SUBPROGRAM_ID	NUMBER	The subprogram identifier of the current executed PSM
CPU_TIME	NUMBER	CPU time (microseconds)
ELAPSED_TIME	NUMBER	SQL execution time (microseconds)
FETCHES	NUMBER	Number of fetches
APPLICATION_WAIT_TIME	NUMBER	Total amount of application wait time
CONCURRENCY_WAIT_TIME	NUMBER	Total amount of concurrency wait time
CLUSTER_WAIT_TIME	NUMBER	Total amount of cluster wait time
USER_IO_WAIT_TIME	NUMBER	Total amount of I/O wait time (by user)
DISK_READS	NUMBER	Disk read count
DIRECT_WRITES	NUMBER	Direct disk write cnt without through buffer cache
BUFFER_GETS	NUMBER	Total number of buffers read in Consistent-Read mode
PHYSICAL_READ_REQUESTS	NUMBER	Disk read request count
PHYSICAL_READ_BYTES	NUMBER	Total number of bytes read from disks (in bytes)
PHYSICAL_WRITE_REQUESTS	NUMBER	Disk write request count
PHYSICAL_WRITE_BYTES	NUMBER	Total number of bytes write to disks (in bytes)

4.2.120. V\$SQL_PLAN

Displays information on physical plans to execute SQL statements.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of the SQL statement

Column Name	Data Type	Description
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
OPERATION	VARCHAR(128)	Name of operation job
OBJECT#	NUMBER	Identifier of object accessed by the job
OBJECT_OWNER	VARCHAR(128)	Name of user who has the object
OBJECT_NAME	VARCHAR(128)	Object name
OBJECT_TYPE	VARCHAR(20)	Object type
ID	NUMBER	Number given to each job of the physical plan
PARENT_ID	NUMBER	ID of the next execution step that operates on the output of the current step in the physical plan
DEPTH	NUMBER	Tree level of the physical plan
POSITION	NUMBER	Positions between all the jobs with the same PARENT_ID
SEARCH_COLUMNS	NUMBER	The number of keys used in index search
COST	NUMBER	Job cost estimated by query optimizer
CPU_COST	NUMBER	CPU cost of the operation as estimated by optimizer
IO_COST	NUMBER	I/O cost of the operation as estimated by optimizer
CARDINALITY	NUMBER	The number of output results estimated by query optimizer
PSTART	VARCHAR(38)	In a partitioned table, a start partition for access
PEND	VARCHAR(38)	In a partitioned table, an end partition for access
OTHERS	VARCHAR(4000)	Other information specific to the execution step that users may find useful
ACCESS_PREDICATES	VARCHAR(4000)	Predicate information to access indexes or to handle joins

Column Name	Data Type	Description
FILTER_PREDICATES	VARCHAR(4000)	Predicate information to handle filters
ADVISED_COLNO	VARCHAR(4000)	Column number(s) recommended as indexes by the advisor for the plan's TSCAN FULL node.

4.2.121. V\$SQL_PLAN_MONITOR

Displays plan level information about each SQL execution registered in V\$SQL_MONITOR. Each row corresponds to a single plan operation of one SQL execution.

- Columns

Column Name	Data Type	Description
STATUS	VARCHAR(19)	Shows the current execution state of the SQL statement. - EXECUTING: The SQL statement is currently being executed. - DONE(ERROR): The SQL statement generated a runtime error and was closed. - DONE(FIRST N ROWS): Execution completed before all rows were fetched. - DONE(ALL ROWS): Execution completed after all rows were fetched. - DONE: Completed execution of parallel slaves.
SQL_ID	VARCHAR(13)	SQL identifier
SQL_EXEC_START	DATE	The time when the execution started.
SQL_EXEC_ID	NUMBER	Execution identifier. It is necessary to identify multiple simultaneous SQL executions. To identify a single SQL execution, three columns; SQL_ID, SQL_EXEC_START, and SQL_EXEC_ID must be defined. The three column values are used to match with corresponding rows in the V\$SQL_MONITOR.
SID	NUMBER	Session identifier

Column Name	Data Type	Description
SQL_PLAN_HASH_VALUE	NUMBER	Hash value of the execution plan
PLAN_PARENT_ID	NUMBER	Identifier of the parent plan operation of this operation
PLAN_LINE_ID	NUMBER	Identifier of the plan operation
PLAN_OPERATION	VARCHAR(30)	Name of the plan operation
PLAN_DEPTH	NUMBER	Level of the plan operation within the execution plan tree
PLAN_POSITION	NUMBER	Logical number among siblings within the plan execution tree
PLAN_COST	NUMBER	Cost of the plan operation estimated by the optimizer
PLAN_CPU_COST	NUMBER	CPU cost of the plan operation estimated by the optimizer
PLAN_IO_COST	NUMBER	I/O cost of the plan operation estimated by the optimizer
PLAN_CARDINALITY	NUMBER	The number of rows displayed in a plan operation estimated by the optimizer
PLAN_OBJECT_OWNER	VARCHAR(30)	Owner of the table or index used by this operation
PLAN_OBJECT_NAME	VARCHAR(30)	Name of the table or index used by this operation
PLAN_OBJECT_TYPE	VARCHAR(30)	Type of object used by this operation
PLAN_PARTITION_START	VARCHAR(64)	Start partition when accessing part of a partitioned object
PLAN_PARTITION_STOP	VARCHAR(64)	End partition when accessing part of a partitioned object
FIRST_CHANGE_TIME	DATE	First time the operation was changed to an upper level operation
LAST_CHANGE_TIME	DATE	Last time the operation was changed to an upper level operation
STARTS	NUMBER	Number of times the operation was executed. (Repeated index accesses, etc.)

Column Name	Data Type	Description
OUTPUT_ROWS	NUMBER	Number of rows produced by this operation
PHYSICAL_READ_REQUESTS	NUMBER	Disk read count requested by this operation
PHYSICAL_READ_BYTES	NUMBER	Total number of bytes read from disks by this operation (in bytes)
PHYSICAL_WRITE_REQUESTS	NUMBER	Disk write count requested by this operation
PHYSICAL_WRITE_BYTES	NUMBER	Total number of bytes write to disks by this operation (in bytes)
WORKAREA_MEM	NUMBER	Size of private memory space occupied by this operation (in bytes)
WORKAREA_MAX_MEM	NUMBER	Maximum value for WORKAREA_MEM
WORKAREA_TEMPSEG	NUMBER	Sum of temporary segment size currently occupied by this operation (in bytes)
WORKAREA_MAX_TEMPSEG	NUMBER	Maximum value for WORKAREA_TEMPSEG

4.2.122. V\$SQL_PLAN_STATISTICS

Displays statistics of results of each physical plan job.

- Columns

Column Name	Data Type	Description
HASH_VALUE	NUMBER	Hash value of the SQL statement
PLAN_HASH_VALUE	NUMBER	Hash value of the physical plan
SQL_ID	VARCHAR(13)	SQL identifier
CHILD_NUMBER	NUMBER	The number of this child physical plan
ID	NUMBER	Number given to each job of the physical plan
EXECUTIONS	NUMBER	The number of times that a particular job has been performed

Column Name	Data Type	Description
LAST_STARTS	NUMBER	The number of times that a particular job was started during the last execution
STARTS	NUMBER	Total number of times that a particular job has been started
LAST_OUT PUT_ROWS	NUMBER	The number of rows created in a particular job during the last execution
OUTPUT_ROWS	NUMBER	Total number of rows created in a particular job
LAST_LEFT_IN PUT_ROWS	NUMBER	The number of rows which a particular job accepted from a left-side lower job during the last execution
LEFT_INPUT_ROWS	NUMBER	Total number of rows which a particular job has accepted from a left-side lower job
LAST_RIGHT_IN PUT_ROWS	NUMBER	The number of rows which a particular job accepted from a right-side lower job during the last execution
RIGHT_INPUT_ROWS	NUMBER	Total number of rows which a particular job has accepted from a right-side lower job
LAST_CR_BUFFER_GETS	NUMBER	The number of buffers which a particular job read in Consistent-Read mode during the last execution
CR_BUFFER_GETS	NUMBER	Total number of buffers which a particular job has read in Consistent-Read mode
LAST_ELAPSED_TIME	NUMBER	Time for which a particular job was performed in the last execution (in milliseconds)
ELAPSED_TIME	NUMBER	Total time for which a particular job has been performed (in milliseconds)
LAST_MEM_USAGE	NUMBER	Memory usage for a particular operation during the last execution.
MEM_USAGE	NUMBER	Total memory usage for which a particular job has been performed
LAST_TEMP_SEG MENT_READ_CNT	NUMBER	The number of temporary segment read which a particular job was performed in the last execution

Column Name	Data Type	Description
TEMP_SEGMENT_READ_CNT	NUMBER	Total number of temporary segment read which a particular job was performed in the last execution
LAST_TEMP_SEGMENT_WRITE_CNT	NUMBER	The number of temporary segment write which a particular job was performed in the last execution
TEMP_SEGMENT_WRITE_CNT	NUMBER	Total number of temporary segment write which a particular job was performed in the last execution
LAST_CU_BUFFER_GETS	NUMBER	The number of buffers which a particular job read in Current mode during the last execution
CU_BUFFER_GETS	NUMBER	Total number of buffers which a particular job has read in Current mode

4.2.123. V\$SQL_WORKAREA

Display information about work areas used by SQL cursors.

- Columns

Column Name	Data Type	Description
ADDRESS	RAW(8)	Address of the parent statement
HASH_VALUE	NUMBER	Hash value of the parent statement in the library cache
SQL_ID	VARCHAR(13)	SQL identifier of the parent statement in the library cache
WORKAREA_ADDRESS	RAW(8)	Address of the work area
OPERATION_TYPE	VARCHAR(20)	Operation type that uses the work area
OPERATION_ID	NUMBER	Identifier used to distinguish this operation from the execution plan
POLICY	VARCHAR(10)	Policy that determines the work area size (MANUAL or AUTO)
ESTIMATED_OPTIMAL_SIZE	NUMBER	The minimum size (in bytes) for the work area to be executed in memory only

Column Name	Data Type	Description
ESTIMATED_ONEPASS_SIZE	NUMBER	The minimum size (in bytes) of the work area, to be executed by one-time disk use
LAST_MEMORY_USED	NUMBER	The memory size (in bytes) that was used by the work area during the last execution
LAST_EXECUTION	VARCHAR(10)	The Process that the work area used during the last execution - OPTIMAL: optimal mode execution - N PASS: multi pass mode execution
LAST_DEGREE	NUMBER	Parallelization degree of the work area, during the last execution
TOTAL_EXECUTIONS	NUMBER	Count of the number of times the work area was executed
OPTIMAL_EXECUTIONS	NUMBER	Count of the number of times that the work area was executed in optimal mode
ONEPASS_EXECUTIONS	NUMBER	Count of the number of times that the work area was executed in one-pass mode
MULTIPASSES_EXECUTIONS	NUMBER	Count of the number of times that the work area was executed in multi-pass mode
ACTIVE_TIME	NUMBER	Average time this work area is active
MAX_TEMPSEG_SIZE	NUMBER	The maximum size (in bytes) of a temporary segment, that the work area uses
LAST_TEMPSEG_SIZE	NUMBER	The temporary segment size (in bytes), that was used by the work area in the last execution

4.2.124. V\$SQL_WORKAREA_HISTOGRAM

Display the cumulative work area execution statistics

- Columns

Column Name	Data Type	Description
LOW_OPTIMAL_SIZE	NUMBER	The lower bounding value (in bytes) for the optimal size
HIGH_OPTIMAL_SIZE	NUMBER	The higher bounding value (in bytes) for the optimal size
OPTIMAL_EXECUTIONS	NUMBER	Number of work areas with an optimal memory requirement between LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE which have been executed in optimal mode.
ONEPASS_EXECUTIONS	NUMBER	The number of work areas that were executed in one-pass mode, within each LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE bound
MULTIPASSES_EXECUTIONS	NUMBER	The number of work areas that were executed in multi-pass mode, within each LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE bound
TOTAL_EXECUTIONS	NUMBER	The total number of work areas that were executed within each LOW_OPTIMAL_SIZE and HIGH_OPTIMAL_SIZE bound

4.2.125. V\$SSVR_CLIENT

Displays information of valid connection to the storage server instance.

- Columns

Column Name	Data Type	Description
ADDRESS	VARCHAR(20)	ITHR address number
PORT	NUMBER	ITHR port number
NAME	VARCHAR(128)	DB name
THREAD_NUMBER	NUMBER	Connection Thread number

4.2.126. V\$SSVR_FLASHCACHE

Displays information of flashcaches used by the storage server instance.

- Columns

Column Name	Data Type	Description
FLASHCACHE_NUMBER	NUMBER	Flashcache number
NAME	VARCHAR(32)	Flashcache name
PATH	VARCHAR(256)	Flashcache path (full)
OS_BYTES	NUMBER	Flashcache size

4.2.127. V\$SSVR_GRID_DISK

Displays information of grid disks.

- Columns

Column Name	Data Type	Description
GRID_DISK_NUMBER	NUMBER	Grid disk number
NAME	VARCHAR(128)	Grid disk name
STORAGE_DISK_NUMBER	NUMBER	Storage disk number
STORAGE_DISK_OFFSET	NUMBER	Storage disk offset
TOTAL_BYTES	NUMBER	Grid disk size

4.2.128. V\$SSVR_IOLOAD

IO load of storage server

- Columns

Column Name	Data Type	Description
TYPE	VARCHAR(32)	!!! No documentation yet !!!
NAME	VARCHAR(32)	!!! No documentation yet !!!
READ_CNT	NUMBER	!!! No documentation yet !!!

Column Name	Data Type	Description
READ_CNT_INTER NAL	NUMBER	!!! No documentation yet !!!
READ_MB	NUMBER	!!! No documentation yet !!!
READ_INTERNAL_MB	NUMBER	!!! No documentation yet !!!
WRITE_CNT	NUMBER	!!! No documentation yet !!!
WRITE_CNT_INTER NAL	NUMBER	!!! No documentation yet !!!
WRITE_MB	NUMBER	!!! No documentation yet !!!
WRITE_INTER NAL_MB	NUMBER	!!! No documentation yet !!!

4.2.129. V\$SSVR_IORM_CATEGORY_PLAN

Category Plan List used by the storage server instance

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(128)	!!! No documentation yet !!!
SHARE_NUMBER	NUMBER	!!! No documentation yet !!!
LIMIT	NUMBER	!!! No documentation yet !!!
STATUS	VARCHAR(8)	!!! No documentation yet !!!

4.2.130. V\$SSVR_IORM_DB_PLAN

DB Plan List used by the storage server instance

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(128)	!!! No documentation yet !!!
SHARE_NUMBER	NUMBER	!!! No documentation yet !!!

Column Name	Data Type	Description
LIMIT	NUMBER	!!! No documentation yet !!!
STATUS	VARCHAR(8)	!!! No documentation yet !!!

4.2.131. V\$SSVR_IOSTAT

IO stat per sec of storage server

- Columns

Column Name	Data Type	Description
TYPE	VARCHAR(32)	!!! No documentation yet !!!
NAME	VARCHAR(32)	!!! No documentation yet !!!
TPS_READ	NUMBER	!!! No documentation yet !!!
TPS_READ_INTER NAL	NUMBER	!!! No documentation yet !!!
READ_MB_sec	NUMBER	!!! No documentation yet !!!
READ_INTER NAL_MB_sec	NUMBER	!!! No documentation yet !!!
TPS_WRITE	NUMBER	!!! No documentation yet !!!
TPS_WRITE_INTER NAL	NUMBER	!!! No documentation yet !!!
WRITE_MB_sec	NUMBER	!!! No documentation yet !!!
WRITE_INTER NAL_MB_sec	NUMBER	!!! No documentation yet !!!

4.2.132. V\$SSVR_MEMSTAT

Memory stat of storage server

- Columns

Column Name	Data Type	Description
TOTAL_PGA_MEMORY	NUMBER	!!! No documentation yet !!!
FIXED_PGA_MEMORY	NUMBER	!!! No documentation yet !!!
USED_PGA_MEMORY	NUMBER	!!! No documentation yet !!!
TO TAL_SHARED_MEMORY	NUMBER	!!! No documentation yet !!!
FIXED_SHARED_MEMORY	NUMBER	!!! No documentation yet !!!
USED_SHARED_MEMORY	NUMBER	!!! No documentation yet !!!

4.2.133. V\$SSVR_SLAB_STAT

used buffer slab information of storage server

- Columns

Column Name	Data Type	Description
SLAB_SIZE_L1	NUMBER	buf_L1_pool slab size
SLAB_GET_CNT_L1	NUMBER	buf_L1_pool slab get count
TO TAL_CHUNK_CNT_L1	NUMBER	buf_L1_pool chunk count
MAX_CHUNK_CNT_L1	NUMBER	buf_L1_pool max chunk count
SLAB_SIZE_L2	NUMBER	buf_L2_pool slab size
SLAB_GET_CNT_L2	NUMBER	buf_L2_pool slab get count
TO TAL_CHUNK_CNT_L2	NUMBER	buf_L2_pool chunk count
MAX_CHUNK_CNT_L2	NUMBER	buf_L2_pool max chunk count
SLAB_SIZE_L3	NUMBER	buf_L3_pool slab size
SLAB_GET_CNT_L3	NUMBER	buf_L3_pool slab get count

Column Name	Data Type	Description
TO TAL_CHUNK_CNT_L3	NUMBER	buf_L3_pool chunk count
MAX_CHUNK_CNT_L3	NUMBER	buf_L3_pool max chunk count

4.2.134. V\$SSVR_STORAGE_DISK

Displays information of storage disks used by the storage server instance.

- Columns

Column Name	Data Type	Description
STOR AGE_DISK_NUMBER	NUMBER	Storage disk number
NAME	VARCHAR(128)	Storage disk name
PATH	VARCHAR(256)	Storage disk path (full)
OS_BYTES	NUMBER	Storage disk size

4.2.135. V\$STANDBY

Displays information on the database duplication in the RDBMS Standby Cluster.

- Columns

Column Name	Data Type	Description
PRIMARY_ADDR	VARCHAR(80)	Host name and port number of the connection from the primary DB
STATUS	VARCHAR(40)	Status of a thread related to standby
PRIMARY_TSN	NUMBER	TSN updated from primary DB
RECVED_SEQ	NUMBER	Log sequence number received from primary DB
RECVED_BLKNO	NUMBER	Log block number received from primary DB
RECVED_TSN	NUMBER	TSN of last received log block

Column Name	Data Type	Description
ACKED_SEQ	NUMBER	Sequence number of the log which the standby DB reported was successfully flushed
ACKED_BLKNO	NUMBER	Block number of the log which the standby DB reported was successfully flushed
RECOVERED_SEQ	NUMBER	Log sequence number recovered by SMR of the standby DB
RECOVERED_BLKNO	NUMBER	Log block number recovered by SMR of the standby DB
RECOVERED_TSN	NUMBER	TSN after recovered by SMR of the standby DB
OPEN_SEQ	NUMBER	Log sequence number that cannot be used to access the DB as standby
OPEN_BLKNO	NUMBER	Log block number that cannot be used to access the DB as standby

4.2.136. V\$STANDBY_DEST

Displays information on the standby DB in the RDBMS Standby Cluster.

- Columns

Column Name	Data Type	Description
STANDBY_ADDR	VARCHAR(80)	Host name of standby DB and port number
TYPE	VARCHAR(16)	Standby type - LGWR SYNC - LGWR ASYNC - ARCH ASYNC - LGWR PROXY
THREAD#	NUMBER	Redo thread#
FLAGS	VARCHAR(32)	Other information of standby - CONNECTED: connected - NOT CONNECTED: not connected

Column Name	Data Type	Description
SENT_SEQ	NUMBER	Sequence number of transmitted log
SENT_BLKNO	NUMBER	Block number of transmitted log
ACKED_SEQ	NUMBER	Log sequence number reporting that the standby DB was successfully flushed
ACKED_BLKNO	NUMBER	Log block number reporting that the standby DB was successfully flushed

4.2.137. V\$STANDBY_STATUS

Displays information on log duplication of the primary DB in the RDBMS Standby Cluster.

- Columns

Column Name	Data Type	Description
STANDBY_MODE	VARCHAR(16)	Data protection level
FLUSHED_SEQ	NUMBER	Sequence number of log flushed by the standby DB working in LGWR SYNC mode
FLUSHED_BLKNO	NUMBER	Block number of the log flushed by the standby DB working in LGWR SYNC mode
SYNC	VARCHAR(8)	Whether or not LGWR participates in the actions of standby
WAITING	VARCHAR(8)	Event for which LGWR is waiting
DETAILS	VARCHAR(40)	Details of the event for which LGWR is waiting

4.2.138. V\$STATNAME

Displays the detailed information on the statistics event.

- Columns

Column Name	Data Type	Description
STAT#	NUMBER	Event number to obtain statistics

Column Name	Data Type	Description
NAME	VARCHAR(60)	Event name to obtain statistics
CLASS	NUMBER	Class number of the event
CLASS_NAME	VARCHAR(40)	Class name of the event

4.2.139. V\$SYSSTAT

Displays statistics of a system.

- Columns

Column Name	Data Type	Description
STAT#	NUMBER	Event number to obtain statistics
NAME	VARCHAR(60)	Event name to obtain statistics
CLASS	NUMBER	Class number of the event
VALUE	NUMBER	Value of the event (Corresponding to the event name)

4.2.140. V\$SYSSTAT_VALUE

Displays values for getting statistics of a system.

- Columns

Column Name	Data Type	Description
STAT#	NUMBER	Event number to obtain statistics
NAME	VARCHAR(60)	Event name to obtain statistics
VALUE	NUMBER	Value of the event

4.2.141. V\$SYSTEM_EVENT

Displays events performing in the system.

- Columns

Column Name	Data Type	Description
IDX	NUMBER	Event number
NAME	VARCHAR(40)	Name of the event
CLASS	VARCHAR(40)	Class of the event
DESC	VARCHAR(60)	Description of the event
TOTAL_WAITS	NUMBER	Total number of event calls
TOTAL_TIMEOUTS	NUMBER	The number of times that a time-out occurred in an event
TIME_WAITED	NUMBER	The amount of time waited for this event (msec)
AVERAGE_WAIT	NUMBER	The average amount of time waited for this event (msec)
MAX_WAIT	NUMBER	The maximum amount of time waited for this event (msec)

4.2.142. V\$SYSTEM_PARAMETERS

Displays system parameter values.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(64)	System parameter name
VALUE	VARCHAR(1024)	System parameter value

4.2.143. V\$SYS_TIME_MODEL

Displays the system-level time statistics.

- Columns

Column Name	Data Type	Description
STAT_ID	NUMBER	Identifier of a time statistics

Column Name	Data Type	Description
STAT_NAME	VARCHAR(64)	Name of a time statistics
VALUE	NUMBER	Amount of time (in microseconds)

4.2.144. V\$TABLESPACE

Displays information on tablespaces.

- Columns

Column Name	Data Type	Description
TS#	NUMBER	A serial number of tablespace
NAME	VARCHAR(128)	Tablespace name
TYPE	VARCHAR(4)	Tablespace type - DATA - UNDO - TEMP
BIGFILE	CHAR(2)	NO in all cases
FLASHBACK_ON	CHAR(2)	NO in all cases

4.2.145. V\$TACSTAT

Displays statistics of a TAC.

- Columns

Column Name	Data Type	Description
STAT#	NUMBER	Event number to obtain statistics
NAME	VARCHAR(60)	Event name to obtain statistics
VALUE	NUMBER	Value of the event (Corresponding to the event name)

4.2.146. V\$TEMPFILE

Displays temporary files in the database.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	Temporary file number
CREATE_TSN	NUMBER	TSN that created the temporary file
CREATE_DATE	DATE	Time that the temporary file was created
TS#	NUMBER	Number of a tablespace including the temporary file
RFILE#	NUMBER	Relative number of the temporary file in a tablespace
ENABLED	CHAR(3)	Availability (YES in all cases)
BLOCKS	NUMBER	Size of temporary file (the number of blocks)
CREATE_SIZE	NUMBER	Temporary file size when the file was created
NAME	VARCHAR(256)	Path name of temporary file

4.2.147. V\$TEMPSEG_OP_USAGE

Displays temporary segments usage in the server.

- Columns

Column Name	Data Type	Description
SEGTYPE	VARCHAR(32)	Temporary segment type - SORT - HASH - ANALYTIC - INDEX - DATA - LOBDATA
CURRENT_EXTENTS	NUMBER	The number of extents currently allocated

Column Name	Data Type	Description
PEEK_EXTENTS	NUMBER	The peak number of extents allocated after instance boot
MAX_ONE_OP_EXTENTS	NUMBER	The maximum number of extents allocated in single operation

4.2.148. V\$TEMPSEG_USAGE

Displays temporary segments in the server.

- Columns

Column Name	Data Type	Description
USERNAME	VARCHAR(32)	Name of user using the temporary segment
SESSION_NUM	NUMBER	Number of sessions using the temporary segment
SQL_ID	NUMBER	ID of PP cache used by the temporary segment
TABSPACE	VARCHAR(128)	Name of tablespace containing the temporary segment
SEGTYPE	VARCHAR(32)	Temporary segment type - SORT - HASH - ANALYTIC - INDEX - DATA - LOBDATA
SEGFILE#	NUMBER	Absolute number of a file containing the header block of the temporary segment
SEGBLK#	NUMBER	Block number of the header block of the temporary segment
EXTENTS	NUMBER	The number of extents in the temporary segment
BLOCKS	NUMBER	The number of blocks in the temporary segment

Column Name	Data Type	Description
SEGRFNO#	NUMBER	Relative number of a file containing the header block of the temporary segment

4.2.149. V\$TEMPSTAT

Displays statistics of file I/O.

- Columns

Column Name	Data Type	Description
FILE#	NUMBER	File number
PHYRDS	NUMBER	The number of reading times
PHYWRTS	NUMBER	The number of writing times
PHYBLKRD	NUMBER	The number of read blocks
PHYBLKWRT	NUMBER	The number of written blocks
SINGLEBLKRDS	NUMBER	The number of times of reading a single block
READTIM	NUMBER	Reading time (msec)
WRITETIM	NUMBER	Writing time (msec)
SINGLEBLKRDTIM	NUMBER	Time for which a single block was read (msec)
AVGIOTIM	NUMBER	Average I/O time (msec)
LSTIOTIM	NUMBER	Last I/O time (msec)
MINIOTIM	NUMBER	Shortest I/O time (msec)
MAXIORTM	NUMBER	Longest reading time (msec)
MAXIOWTM	NUMBER	Longest writing time (msec)

4.2.150. V\$THR_ACT_INFO

Displays information on activities of the threads.

- Columns

Column Name	Data Type	Description
THR_ID	NUMBER	Thread index
THR_TYPE	VARCHAR(15)	Thread type
THR_NAME	VARCHAR(8)	Thread name
THR_STATUS	VARCHAR(25)	Thread status
PID	NUMBER	Process id
PROC_IDX	NUMBER	Process index
PHY_TID	NUMBER	Thread index within the process
PTHREAD_ID	NUMBER	Pthread id (for pthread_kill etc.)
CUR_ACT_CNT	NUMBER	Current activity counter
NO_ACT_TIME	NUMBER	Elapsed time without explicit thread activity
NO_ACT_TIME_LIMIT	NUMBER	Limit of the elapsed time without explicit thread activity
ACT_REPORT	VARCHAR(3)	Whether or not to report thread activity (on/off)

4.2.151. V\$THR_EVENT

Displays events that are performed in each thread.

- Columns

Column Name	Data Type	Description
TID	NUMBER	Thread ID
IDX	NUMBER	Index of the event
NAME	VARCHAR(40)	Name of the event
CLASS	VARCHAR(40)	Class of the event
DESC	VARCHAR(60)	Description of the event
TOTAL_WAITS	NUMBER	Total number of event calls

Column Name	Data Type	Description
TOTAL_TIMEOUTS	NUMBER	The number of times that a time-out occurred in an event
TIME_WAITED	NUMBER	The amount of time waited for this event (msec)
AVERAGE_WAIT	NUMBER	The average amount of time waited for this event (msec)
MAX_WAIT	NUMBER	The maximum amount of time waited for this event (msec)

4.2.152. V\$TIMER

Displays information on the system timer.

- Columns

Column Name	Data Type	Description
TICK	NUMBER	Elapsed time since the system started

4.2.153. V\$TIMEZONE_NAMES

Displays timezone names.

- Columns

Column Name	Data Type	Description
TZNAME	VARCHAR(40)	Name of the timezone
TZABBREV	VARCHAR(8)	Abbreviation of the timezone

4.2.154. V\$TRANSACTION

Displays ongoing transactions.

- Columns

Column Name	Data Type	Description
SESS_ID	NUMBER	ID of session operation transactions

Column Name	Data Type	Description
USN	NUMBER	Number of Undo segment assigned in the transaction
SLOT	NUMBER	Slot number of transaction in use
WRAP	NUMBER	The number of times of reusing a transaction slot
UEA_FILE	NUMBER	Number of a file containing Undo which a transaction used most recently
UEA_BLK	NUMBER	Number of a block containing Undo which a transaction used most recently
UEA_SEQ	NUMBER	A serial number of Undo which a transaction used most recently
UEA_ROW	NUMBER	A row number of Undo which a transaction used most recently
STATE	NUMBER	Status of transaction
START_TIME	DATE	Transaction start time
START_BASE	NUMBER	Child value of transaction start TSN
START_WRAP	NUMBER	Parent value of transaction start TSN
START_UEXT	NUMBER	Extent number of Undo space when the transaction starts
START_FILE	NUMBER	File number of Undo space when the transaction starts
START_BLK	NUMBER	Block number of Undo space when the transaction starts
START_SEQ	NUMBER	A serial number of Undo space when the transaction starts
START_ROW	NUMBER	Row number of Undo space when the transaction starts
START_INCNO	NUMBER	Incarnation number of Undo space when the transaction starts
SPACE	NUMBER	Whether or not the transaction is a space management transaction
NAME	VARCHAR(256)	Transaction name

Column Name	Data Type	Description
PTX_USN	NUMBER	Number of Undo segment assigned to the parent transaction
PTX_SLOT	NUMBER	Number of transaction slot in use by the parent transaction
PTX_WRAP	NUMBER	The number of times of reusing a transaction slot in use by the parent transaction
LOG_IO	NUMBER	The number of logical io by transactions
PHY_IO	NUMBER	The number of physical io used by transactions
CR_GET	NUMBER	The number of Consistent block gets by transactions
RECOVERY	VARCHAR(8)	Recovery status - RECOVERY - SUSPEND
USED_BLK	NUMBER	The number of Undo blocks used by transactions
USED_REC	NUMBER	The number of Undo records used by transactions
EXP_RB_TIME	NUMBER	Expectation value of rollback time
TX_TYPE	VARCHAR(20)	Transaction type - LOCAL - XA - XA_RECOVERY - DBLINK

4.2.155. V\$TSN_TIME

Displays the mapping table of TSN and time.

- Columns

Column Name	Data Type	Description
TSN	NUMBER	TSN

Column Name	Data Type	Description
TIME	TIMESTAMP(6)	TIMESTAMP

4.2.156. V\$UNDOSTAT

Displays statistics of Undo storage.

- Columns

Column Name	Data Type	Description
BEGIN_TIME	DATE	Start time of statistics
END_TIME	DATE	End time of statistics
UNDO_TSNO	NUMBER	Tablespace number
UNDOBLKS	NUMBER	The number of used blocks
TXCOUNT	NUMBER	Total number of executed transactions
MAXCONCURRENCY	NUMBER	The largest number of concurrently executed transactions
SNAP_TOO_OLD_CNT	NUMBER	The number of errors caused by failing to read old data
NOSPACEERRCNT	NUMBER	The number of errors caused by lack of Undo storage space
ACTIVEBLKS	NUMBER	The number of blocks in use
UNEXPIREDBLKS	NUMBER	The number of non reusable blocks
EXPIREDBLKS	NUMBER	The number of reusable blocks

4.2.157. V\$UNDO_FREE_SPACE

Displays free space in block count for each UNDO tablespace.

- Columns

Column Name	Data Type	Description
TS_ID	NUMBER	ID of the UNDO tablespace
TS_NAME	VARCHAR(128)	Name of the UNDO tablespace
TOTAL_BLOCKS	NUMBER	The total number of blocks in the UNDO tablespace
FREE_BLOCKS	NUMBER	The number of free blocks in the UNDO tablespace
TOTAL_SIZE	NUMBER	The total size of the UNDO tablespace in bytes
FREE_SIZE	NUMBER	The free size of the UNDO tablespace in bytes

4.2.158. V\$USGMT_TXENTRY

Displays undo segment transaction entry information.

- Columns

Column Name	Data Type	Description
USN	NUMBER	Undo segment number
SLOT	NUMBER	Slot number of transaction entry
WRAP	NUMBER	The number of times of reusing a transaction slot
STATUS	VARCHAR(32)	Status information
FLAGS	VARCHAR(32)	Other information of transaction entry
UEA_FILE	NUMBER	Number of a file containing undo which a transaction used most recently
UEA_BLOCK	NUMBER	Number of a block containing undo which a transaction used most recently
UEA_DBA	NUMBER	Starting DBA of a transaction
UBLKCNT	NUMBER	Used undo block count

4.2.159. V\$VERSION

Displays RDBMS version information.

- Columns

Column Name	Data Type	Description
NAME	VARCHAR(32)	Name of the version information
VALUE	VARCHAR(32)	Value of the version information
VALUE	VARHCHAR(256)	Banner of the version information

4.2.160. V\$WAITER_SESSION

Displays information on the sessions that wait for a lock acquisition

- Columns

Column Name	Data Type	Description
WAIT_SID	NUMBER	Session ID that waits for a lock acquisition
TYPE	VARCHAR(25)	Type of the lock
ID1	NUMBER	First ID of the lock
ID2	NUMBER	Second ID of the lock
MODE_REQ	NUMBER	Lock mode by which is requested
HOLD_SID	NUMBER	Session ID that owns the requested lock
MODE_HELD	NUMBER	Lock mode by which is owned

4.2.161. V\$WAITSTAT

Displays information on block wait events for each block type and class

- Columns

Column Name	Data Type	Description
CLASS	VARCHAR(20)	Block class (Block type)

Column Name	Data Type	Description
COUNT	NUMBER	The number of times waiting for the block class
TIME	NUMBER	Total time spent waiting for the block class

4.2.162. V\$WAITUSE_STAT

Displays information on block wait events

- Columns

Column Name	Data Type	Description
CLASS	VARCHAR(20)	Block class (Block type)
PIN_USE	VARCHAR(15)	The pin usage of the block pin owners
WAIT_USE	VARCHAR(15)	The pin usage of the block pin waiters
COUNT	NUMBER	The number of times waiting for the block class and pin usage
TIME	NUMBER	Total time spent waiting for the block class and pin usage

4.2.163. V\$WAITUSE_THR_STAT

Displays information on block wait events for each block type, class, and pin usage

- Columns

Column Name	Data Type	Description
CLASS	VARCHAR(20)	Block class (Block type)
PIN_USE	VARCHAR(15)	The pin usage of the buffer pin owners
WAIT_USE	VARCHAR(15)	The pin usage of the buffer pin waiters
COUNT	NUMBER	The number of times waiting for the block class and pin usage

Column Name	Data Type	Description
TIME	NUMBER	Total time spent waiting for the block class and pin us age

Appendix A. 초기화 파라미터의 설정 예제

본 장에서는 Tibero를 설치하고 나서 자동으로 설정되는 초기화 파라미터를 설명한다. 초기화 파라미터에 대한 자세한 내용은 “제1장 Introduction to Initialization Parameters”를 참고한다.

다음은 초기화 파라미터를 설정한 예이다.

<\$TB_SID.tip>

```
DB_NAME=$TB_SID
LISTENER_PORT=8629
CONTROL_FILES="$TB_HOME/database/tibero/c1.ctl"

MAX_SESSION_COUNT=20

TOTAL_SHM_SIZE=1G
MEMORY_TARGET=2G
```

다음은 위 예에서 설정한 각 파라미터에 대한 설명이다.

파라미터	설명
DB_NAME	데이터베이스 이름을 설정한다. (기본값: tibero)
LISTENER_PORT	리스너가 사용할 포트 번호를 설정한다. (기본값: 8629) SHMKEY와 더불어 한 서버에서 두 개 이상의 데이터베이스 인스턴스를 수행할 때에는 반드시 다르게 설정해 줘야 한다.
CONTROL_FILES	컨트롤 파일이 존재하는 위치로서 절대 경로로 설정한다.
MAX_SESSION_COUNT	사용자들이 접속해서 동시에 사용할 수 있는 세션의 최대 개수를 설정한다.
TOTAL_SHM_SIZE	데이터베이스의 인스턴스 내에서 사용할 전체 공유 메모리의 크기를 설정한다. 전체 공유 메모리의 크기는 DB_CACHE_SIZE + LOG_BUFFER + 20M(초기 기동 시 할당 영역)+ (WTHR_PROC_CNT * _WTHR_PER_PROC)* 1M를 계산한 값보다 좀 더 초과하여 설정하면 된다.
MEMORY_TARGET	데이터베이스의 인스턴스 내에서 사용할 전체 메모리의 크기를 설정한다.

파라미터	설명
	이는 전체 공유 메모리와 프로세스 각각 사용할 메모리 전체를 합친 크기로 <code>TOTAL_SHM_SIZE + (프로세스에서 사용할 메모리 전체)</code> 를 계산한 값으로 설정하면 된다.

참고

1. 초기화 파라미터는 시스템의 사용 환경에 따라 사용하는 파라미터가 다를 수 있으며, 추가로 설정할 수 있다.
2. `TOTAL_SHM_SIZE` 및 `MEMORY_TARGET`를 설정하는 경우 Megabyte, Gigabyte 단위로 설정하는 경우 M, G 단위로 입력하며 byte의 경우 숫자만을 입력해준다.

색인

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