Capitol 4

Creating a Database

Every running Oracle database is associated with an Oracle instance. When a database is started on a database server (regardless of the type of computer), Oracle allocates a memory area called the System Global Area (SGA) and starts one or more Oracle processes. This combination of the SGA and the Oracle processes is called an **Oracle instance**. The memory and processes of an instance manage the associated database's data efficiently and serve the one or multiple users of the database.

A) Oracle Database Logical Structure

A logical structure hierarchy exists as follows:
• An Oracle database contains at least one tablespace.
• A tablespace contains one or more segments.
• A segment is made up of extents.
• An extent is made up of logical blocks.
• A block is the smallest unit for read and write operations.

The Oracle database architecture includes logical and physical structures database.

• The physical structure includes the control files, online redo log files, that make up the database.
• The logical structure includes tablespaces, segments, extents, and data.
The Oracle server enables fine-grained control of disk space use through logical storage structures, including segments, extents, and data blocks.

Tablespaces
The data in an Oracle database is stored in tablespaces.
• An Oracle database can be logically grouped into smaller logical areas of space known as tablespaces.
• A tablespace can belong to only one database at a time.
• Each tablespace consists of one or more operating system files, which are called data files.
• A tablespace may contain one or more segments.
• Tablespaces can be brought online while the database is running.
• Except for the `SYSTEM` tablespace or a tablespace with an active undo segment, tablespaces can be taken offline, leaving the database running.
• Tablespaces can be switched between read/write and read-only status.

Data Files (Not a logical structure)
• Each tablespace in an Oracle database consists of one or more files called data files.
These are physical structures that conform with the operating system on which the Oracle server is running.
• A data file can belong to only one tablespace.
• An Oracle server creates a data file for a tablespace by allocating the specified amount of disk space plus a small amount of overhead.
• The database administrator can change the size of a data file after its creation or can specify that a data file should dynamically grow as objects in the tablespace grow.

Segments
• A segment is the space allocated for a specific logical storage structure within a tablespace.
• A tablespace may consist of one or more segments.
• A segment cannot span tablespaces; however, a segment can span multiple data files that belong to the same tablespace.
• Each segment is made up of one or more extents.

Extents
Space is allocated to a segment by extents.
• One or more extents make up a segment.
- When a segment is created, it consists of at least one extent.
- As the segment grows, extents are added to the segment.
- The DBA can manually add extents to a segment.
• An extent is a set of contiguous Oracle blocks.
• An extent cannot span data files, and therefore, it must exist in one datafile.

Data Blocks
The Oracle server manages the storage space in the data files in units called Oracle blocks or data blocks.
• At the finest level of granularity, the data in an Oracle database is stored in data blocks.
• Oracle data blocks are the smallest units of storage that the Oracle server can allocate, read, or write.
• One data block corresponds to one or more operating system blocks allocated from an existing data file.
• The standard data block size for an Oracle database is specified by the `DB_BLOCK_SIZE` initialization parameter when the database is created.
• The data block size should be a multiple of the operating system block size to avoid unnecessary I/O.
• The maximum data block size is dependent on the operating system.

B) Creating a Database Manually

• Create the initialization parameter file.
The initialization parameter file is created using the sample `init.ora` file installed during the installation process. Copy the sample `init.ora` and name it `initSID.ora`. Make modifications to the file specific to the needs of the database you will be creating. If an SPFILE is to be used, the PFILE must be created first. Refer to the "Managing an Oracle Instance" lesson for instructions on how to create a database specific `initSID.ora` file and an SPFILE.
• Start the instance in `NOMOUNT`.
Connect as user `SYS` with `SYSDBA` privilege. The database must be placed in the `NOMOUNT` state in order to create a database. Refer to the "Managing an Oracle Instance" lesson for directions on how to place the database in a `NOMOUNT` state.

• Create and execute the CREATE DATABASE command.
- Create an SQL script that contains the CREATE DATABASE command. Connect to SQL*Plus as the SYS user with the SYSDBA privilege. With the database in NOMOUNT state, execute the script.
- The CREATE DATABASE command will be dramatically simplified if the database being created is to use Oracle Managed Files (OMF) to manage the operating system files. Refer to the "Managing an Oracle Instance" lesson for information regarding OMF.
• Run scripts.
- Two scripts catalog.sql and catproc.sql must be run after the database is created. Both scripts must be run as the user SYS with SYSDBA privilege. Before executing the scripts the database must be placed in the OPEN state.
- catalog.sql: Creates the views on the base tables and on the dynamic performance views, and their synonyms. It starts other scripts that create objects for:
· Basic PL/SQL environment, including declarations for PL/SQL data types, predefined exceptions, built-in procedures and functions, SQL operations
· Auditing
· Import/Export
· SQL*Loader
· Installed options

Examples

1)

```
% sqlplus 'sys/oracle as sysdba'
SQL> startup nomount
ORACLE instance started.
Total System Global Area 21790532 bytes
Fixed Size 278340 bytes
Variable Size 16777216 bytes
Database Buffers 4194304 bytes
Redo Buffers 540672 bytes

SQL> @crdbdb01.sql
SQL> CREATE DATABASE db01
LOGFILE
GROUP 1 ('$HOME/ORADATA/u03/log_01_01_db01.rdo') SIZE 1M,
GROUP 2 ('$HOME/ORADATA/u03/log_02_01_db01.rdo') SIZE 1M
DATAFILE '$HOME/ORADATA/u01/system_01_db01.dbf' SIZE 1M
AUTOEXTEND ON NEXT 5M MAXSIZE 150M
DEFAULT TEMPORARY TABLESPACE temp
TEMPFILE '$HOME/ORADATA/u02/temp_01_db01.dbf' SIZE 1M
AUTOEXTEND ON NEXT 5M MAXSIZE 1M
CHARACTER SET WE8ISO8859P1
NATIONAL CHARACTER SET AL16UTF16
/
Statement processed.
```

2)

```
CREATE DATABASE user01
USER SYS IDENTIFIED BY ORACLE
USER SYSTEM IDENTIFIED BY MANAGER
CONTROLFILE REUSE
LOGFILE
GROUP 1 ('E:/student/redo01.log') SIZE 100M,
GROUP 2 ('E:/student/redo02.log') SIZE 100M,
GROUP 3 ('E:/student/redo03.log') SIZE 100M
MAXLOGFILES 5
MAXLOGMEMBERS 5
MAXLOGHISTORY 1
MAXDATAFILES 100
MAXINSTANCES 1
ARCHIVELOG
FORCE LOGGING
CHARACTER SET US7ASCII
NATIONAL CHARACTER SET AL16UTF16
```

3)

```
CREATE DATABASE DBA01
LOGFILE
GROUP 1 (’/$HOME/ORADATA/u01/redo01.log’) SIZE 100M,
GROUP 2 (’/$HOME/ORADATA/u02/redo02.log’) SIZE 100M,
MAXLOGFILES 5
MAXLOGMEMBERS 5
MAXLOGHISTORY 1
MAXDATAFILES 100
MAXINSTANCES 1
DATAFILE ’/$HOME/ORADATA/u01/system01.dbf’ SIZE 325M
UNDO TABLESPACE undotbs
DATAFILE ’/$HOME/ORADATA/u02/undotbs01.dbf’ SIZE 200
DEFAULT TEMPORARY TABLESPACE temp
TEMPFILE ’/$HOME/ORADATA/u03/temp01.dbf’ SIZE 4M
CHARACTER SET US7ASCII
```

DATA BASE DICTIONARY

(Capitolul 5)

1) Structura dictionarului de date

```
SQL> desc dictionary
 Name                          Null?    Type
 ----------------------------------------- -------- ----------------------------
 TABLE_NAME                               VARCHAR2(30)
 COMMENTS                                 VARCHAR2(4000)
```

```
SQL> select table_name from dictionary where table_name like 'USER%';

TABLE_NAME
------------------------------
USER_INDEXES
USER_IND_COLUMNS
USER_IND_EXPRESSIONS
USER_JOIN_IND_COLUMNS
USER_OBJECTS
USER_PROCEDURES
USER_STORED_SETTINGS
USER_PLSQL_OBJECT_SETTINGS
USER_ARGUMENTS
USER_RESUMABLE
USER_ROLE_PRIVS
USER_SYS_PRIVS
USER_SEQUENCES
USER_SYNONYMS
USER_TABLES
USER_OBJECT_TABLES
USER_ALL_TABLES
USER_TAB_COLS
USER_TAB_COLUMNS
USER_NESTED_TABLE_COLS
USER_TAB_COL_STATISTICS
USER_TAB_HISTOGRAMS
USER_TAB_COMMENTS
USER_TAB_PRIVS
USER_TAB_PRIVS_MADE
USER_TAB_PRIVS_RECD
USER_USERS
USER_PROXIES
USER_VIEWS
USER_CONSTRAINTS
```

2) Toate tabelele din userul crt.

```
SQL> desc user_tables
```

Name	Null?	Type
TABLE_NAME	NOT NULL	VARCHAR2(30)
TABLESPACE_NAME		VARCHAR2(30)
CLUSTER_NAME		VARCHAR2(30)
IOT_NAME		VARCHAR2(30)
PCT_FREE		NUMBER
PCT_USED		NUMBER
INI_TRANS		NUMBER
MAX_TRANS		NUMBER
INITIAL_EXTENT		NUMBER
NEXT_EXTENT		NUMBER
MIN_EXTENTS		NUMBER
MAX_EXTENTS		NUMBER
PCT_INCREASE		NUMBER
FREELISTS		NUMBER
FREELIST_GROUPS		NUMBER
LOGGING		VARCHAR2(3)
BACKED_UP		VARCHAR2(1)
NUM_ROWS		NUMBER
BLOCKS		NUMBER
EMPTY_BLOCKS		NUMBER
AVG_SPACE		NUMBER
CHAIN_CNT		NUMBER
AVG_ROW_LEN		NUMBER
AVG_SPACE_FREELIST_BLOCKS		NUMBER
NUM_FREELIST_BLOCKS		NUMBER
DEGREE		VARCHAR2(10)
INSTANCES		VARCHAR2(10)
CACHE		VARCHAR2(5)
TABLE_LOCK		VARCHAR2(8)
SAMPLE_SIZE		NUMBER
LAST_ANALYZED		DATE
PARTITIONED		VARCHAR2(3)
IOT_TYPE		VARCHAR2(12)
TEMPORARY		VARCHAR2(1)
SECONDARY		VARCHAR2(1)
NESTED		VARCHAR2(3)
BUFFER_POOL		VARCHAR2(7)
ROW_MOVEMENT		VARCHAR2(8)
GLOBAL_STATS		VARCHAR2(3)
USER_STATS		VARCHAR2(3)
DURATION		VARCHAR2(15)
SKIP_CORRUPT		VARCHAR2(8)
MONITORING		VARCHAR2(3)
CLUSTER_OWNER		VARCHAR2(30)

```
 DEPENDENCIES                              VARCHAR2(8)
```

```
SQL> select table_name from user_tables;

TABLE_NAME
------------------------------
BONUS
DEPT
EMP
SALGRADE
```

3) Vizualizare obiectelor create de un user

```
SQL> desc user_objects
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 OBJECT_NAME                                        VARCHAR2(128)
 SUBOBJECT_NAME                                     VARCHAR2(30)
 OBJECT_ID                                          NUMBER
 DATA_OBJECT_ID                                     NUMBER
 OBJECT_TYPE                                        VARCHAR2(18)
 CREATED                                            DATE
 LAST_DDL_TIME                                      DATE
 TIMESTAMP                                          VARCHAR2(19)
 STATUS                                             VARCHAR2(7)
 TEMPORARY                                          VARCHAR2(1)
 GENERATED                                          VARCHAR2(1)
 SECONDARY                                          VARCHAR2(1)
```

```
SQL> select object_name from user_objects;

OBJECT_NAME
--------------------------------------------------------------------------------
BONUS
DEPT
EMP
SALGRADE
```

4) Adaugarea unei constrangeri pe o tabela

```
SQL> alter table dept add constraint deptno_pk primary key (deptno);

Table altered.

SQL> alter table emp add constraint emp_fk foreign key (deptno) references dept(deptno);

Table altered.
```

SQL> select object_name from user_objects;

```
OBJECT_NAME
--------------------------------------------
BONUS
DEPT
DEPTNO_PK
EMP
SALGRADE
```

5) Vizualizare toate constrangerile aferente userului curent

SQL> desc user_constraints

Name	Null?	Type
OWNER	NOT NULL	VARCHAR2(30)
CONSTRAINT_NAME	NOT NULL	VARCHAR2(30)
CONSTRAINT_TYPE		VARCHAR2(1)
TABLE_NAME	NOT NULL	VARCHAR2(30)
SEARCH_CONDITION		LONG
R_OWNER		VARCHAR2(30)
R_CONSTRAINT_NAME		VARCHAR2(30)
DELETE_RULE		VARCHAR2(9)
STATUS		VARCHAR2(8)
DEFERRABLE		VARCHAR2(14)
DEFERRED		VARCHAR2(9)
VALIDATED		VARCHAR2(13)
GENERATED		VARCHAR2(14)
BAD		VARCHAR2(3)
RELY		VARCHAR2(4)
LAST_CHANGE		DATE
INDEX_OWNER		VARCHAR2(30)
INDEX_NAME		VARCHAR2(30)
INVALID		VARCHAR2(7)
VIEW_RELATED		VARCHAR2(14)

SQL> select owner,constraint_name,constraint_type, table_name from user_constraints;

OWNER	CONSTRAINT_NAME	C	TABLE_NAME
UBD1	DEPTNO_PK	P	DEPT
UBD1	EMP_FK	R	EMP

6) Vizualizare structura tabelara

SQL> desc user_tab_columns

Name	Null?	Type
TABLE_NAME	NOT NULL	VARCHAR2(30)
COLUMN_NAME	NOT NULL	VARCHAR2(30)
DATA_TYPE		VARCHAR2(106)
DATA_TYPE_MOD		VARCHAR2(3)
DATA_TYPE_OWNER		VARCHAR2(30)
DATA_LENGTH	NOT NULL	NUMBER
DATA_PRECISION		NUMBER
DATA_SCALE		NUMBER
NULLABLE		VARCHAR2(1)
COLUMN_ID		NUMBER
DEFAULT_LENGTH		NUMBER
DATA_DEFAULT		LONG
NUM_DISTINCT		NUMBER
LOW_VALUE		RAW(32)
HIGH_VALUE		RAW(32)
DENSITY		NUMBER
NUM_NULLS		NUMBER
NUM_BUCKETS		NUMBER
LAST_ANALYZED		DATE
SAMPLE_SIZE		NUMBER
CHARACTER_SET_NAME		VARCHAR2(44)
CHAR_COL_DECL_LENGTH		NUMBER
GLOBAL_STATS		VARCHAR2(3)
USER_STATS		VARCHAR2(3)
AVG_COL_LEN		NUMBER
CHAR_LENGTH		NUMBER
CHAR_USED		VARCHAR2(1)
V80_FMT_IMAGE		VARCHAR2(3)
DATA_UPGRADED		VARCHAR2(3)

SQL> select table_name,column_name,data_type from user_tab_columns where table_name='EMP';

TABLE_NAME	COLUMN_NAME	DATA_TYPE
EMP	EMPNO	NUMBER
EMP	ENAME	VARCHAR2
EMP	JOB	VARCHAR2
EMP	MGR	NUMBER
EMP	HIREDATE	DATE
EMP	SAL	NUMBER
EMP	COMM	NUMBER
EMP	DEPTNO	NUMBER

7) Toate obiectele create de alti useri la care are acces userul crt.

SQL> select table_name from dictionary where table_name like 'ALL%';

```
TABLE_NAME
------------------------------
ALL_XML_SCHEMAS
ALL_XML_SCHEMAS2
ALL_CATALOG
ALL_CLUSTERS
ALL_COL_COMMENTS
ALL_COL_PRIVS
ALL_COL_PRIVS_MADE
ALL_COL_PRIVS_RECD
ALL_ENCRYPTED_COLUMNS
ALL_DB_LINKS
ALL_INDEXES
ALL_IND_COLUMNS
ALL_IND_EXPRESSIONS
ALL_JOIN_IND_COLUMNS
ALL_OBJECTS
ALL_PROCEDURES
ALL_ERRORS
```

8) Vizualizare obiecte pentru toti userii

SQL> desc all_objects

```
 Name                                                                                                  Null?    Type
 -----------------------------------------------------------------------------------------------------------------
 OWNER                                                                                                 NOT NULL VARCHAR2(30)
 OBJECT_NAME                                                                                           NOT NULL VARCHAR2(30)
 SUBOBJECT_NAME                                                                                                 VARCHAR2(30)
 OBJECT_ID                                                                                             NOT NULL NUMBER
 DATA_OBJECT_ID                                                                                                 NUMBER
 OBJECT_TYPE                                                                                                    VARCHAR2(18)
 CREATED                                                                                               NOT NULL DATE
 LAST_DDL_TIME                                                                                         NOT NULL DATE
 TIMESTAMP                                                                                                      VARCHAR2(19)
 STATUS                                                                                                         VARCHAR2(7)
 TEMPORARY                                                                                                      VARCHAR2(1)
 GENERATED                                                                                                      VARCHAR2(1)
 SECONDARY                                                                                                      VARCHAR2(1)
```

SQL> select owner,object_name,object_type from all_objects where owner='SCOTT';

```
OWNER                          OBJECT_NAME                    OBJECT_TYPE
------------------------------ ------------------------------ -----------------
```

SCOTT	BONUS	TABLE
SCOTT	DEPT	TABLE
SCOTT	EMP	TABLE
SCOTT	PK_DEPT	INDEX
SCOTT	PK_EMP	INDEX
SCOTT	SALGRADE	TABLE

9) Vizualizare toate obiectele bazei de date

SQL> select table_name from dictionary where table_name like 'DBA%';

10) Vizualizare informatii despre userii creati pe baza de date

SQL> desc dba_users

Name	Null?	Type
USERNAME	NOT NULL	VARCHAR2(30)
USER_ID	NOT NULL	NUMBER
PASSWORD		VARCHAR2(30)
ACCOUNT_STATUS	NOT NULL	VARCHAR2(32)
LOCK_DATE		DATE
EXPIRY_DATE		DATE
DEFAULT_TABLESPACE	NOT NULL	VARCHAR2(30)
TEMPORARY_TABLESPACE	NOT NULL	VARCHAR2(30)
CREATED	NOT NULL	DATE
PROFILE	NOT NULL	VARCHAR2(30)
INITIAL_RSRC_CONSUMER_GROUP		VARCHAR2(30)
EXTERNAL_NAME		VARCHAR2(4000)

SQL> select username,password from dba_users;

USERNAME	PASSWORD
SYS	C25502B5BB0A298F
SYSTEM	13107DAA798B5279
STUD2	8559EA3BEAC5C774
STUD3	449984BB0BA7005B
UBD1	6CB27176BF298E4B
STUD1	A9F4036978CEC351
SCOTT	F894844C34402B67
UBD2	E8BEF81B3D8D339C
UBD3	D02B9B6DE306737B
DBSNMP	E066D214D5421CCC
OUTLN	4A3BA55E08595C81
WMSYS	7C9BA362F8314299
ORDSYS	7EFA02EC7EA6B86F

```
HR                             6399F3B38EDF3288
MDSYS                          72979A94BAD2AF80
CTXSYS                         71E687F036AD56E5
QS_ES                          E6A6FA4BB042E3C2
QS_WS                          24ACF617DD7D8F2F
QS                             8B09C6075BDF2DC4
QS_ADM                         991CDDAD5C5C32CA
SH                             9793B3777CD3BD1A
PM                             72E382A52E89575A
OE                             9C30855E7E0CB02D
RMAN                           E7B5D92911C831E1
QS_CS                          91A00922D8C0F146
QS_CB                          CF9CFACF5AE24964
QS_CBADM                       7C632AFB71F8D305
QS_OS                          FF09F3EB14AE5C26
XDB                            88D8364765FCE6AF
WKSYS                          69ED49EE1851900D
WKPROXY                        B97545C4DD2ABE54
ODM                            C252E8FA117AF049
ODM_MTR                        A7A32CD03D3CE8D5
OLAPSYS                        3FB8EF9DB538647C

36 rows selected.
```

11) Vizualizare informatii despre tablespace-uri create baza de date

```
SQL> desc dba_tablespaces
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------
 TABLESPACE_NAME                           NOT NULL VARCHAR2(30)
 BLOCK_SIZE                                NOT NULL NUMBER
 INITIAL_EXTENT                                     NUMBER
 NEXT_EXTENT                                        NUMBER
 MIN_EXTENTS                               NOT NULL NUMBER
 MAX_EXTENTS                                        NUMBER
 PCT_INCREASE                                       NUMBER
 MIN_EXTLEN                                         NUMBER
 STATUS                                             VARCHAR2(9)
 CONTENTS                                           VARCHAR2(9)
 LOGGING                                            VARCHAR2(9)
 FORCE_LOGGING                                      VARCHAR2(3)
 EXTENT_MANAGEMENT                                  VARCHAR2(10)
 ALLOCATION_TYPE                                    VARCHAR2(9)
 PLUGGED_IN                                         VARCHAR2(3)
 SEGMENT_SPACE_MANAGEMENT                           VARCHAR2(6)
 DEF_TAB_COMPRESSION                                VARCHAR2(8)
```

RETENTION	VARCHAR2(11)
BIGFILE	VARCHAR2(3)

SQL> select tablespace_name,block_size,max_extents,status from dba_tablespaces;

TABLESPACE_NAME	BLOCK_SIZE	MAX_EXTENTS	STATUS
SYSTEM	8192	2147483645	ONLINE
UNDOTBS1	8192	2147483645	ONLINE
SYSAUX	8192	2147483645	ONLINE
TEMP	8192		ONLINE
USERS	8192	2147483645	ONLINE
EXAMPLE	8192	2147483645	ONLINE
TOP_DATA	8192	2147483645	ONLINE
TOP_TEMP	8192		ONLINE

8 rows selected.

12) Vizualizare informatii despre indecsi

SQL> desc dba_indexes

Name	Null?	Type
OWNER	NOT NULL	VARCHAR2(30)
INDEX_NAME	NOT NULL	VARCHAR2(30)
INDEX_TYPE		VARCHAR2(27)
TABLE_OWNER	NOT NULL	VARCHAR2(30)
TABLE_NAME	NOT NULL	VARCHAR2(30)
TABLE_TYPE		VARCHAR2(11)
UNIQUENESS		VARCHAR2(9)
COMPRESSION		VARCHAR2(8)
PREFIX_LENGTH		NUMBER
TABLESPACE_NAME		VARCHAR2(30)
INI_TRANS		NUMBER
MAX_TRANS		NUMBER
INITIAL_EXTENT		NUMBER
NEXT_EXTENT		NUMBER
MIN_EXTENTS		NUMBER
MAX_EXTENTS		NUMBER
PCT_INCREASE		NUMBER
PCT_THRESHOLD		NUMBER
INCLUDE_COLUMN		NUMBER
FREELISTS		NUMBER
FREELIST_GROUPS		NUMBER
PCT_FREE		NUMBER
LOGGING		VARCHAR2(3)

BLEVEL	NUMBER
LEAF_BLOCKS	NUMBER
DISTINCT_KEYS	NUMBER
AVG_LEAF_BLOCKS_PER_KEY	NUMBER
AVG_DATA_BLOCKS_PER_KEY	NUMBER
CLUSTERING_FACTOR	NUMBER
STATUS	VARCHAR2(8)
NUM_ROWS	NUMBER
SAMPLE_SIZE	NUMBER
LAST_ANALYZED	DATE
DEGREE	VARCHAR2(40)
INSTANCES	VARCHAR2(40)
PARTITIONED	VARCHAR2(3)
TEMPORARY	VARCHAR2(1)
GENERATED	VARCHAR2(1)
SECONDARY	VARCHAR2(1)
BUFFER_POOL	VARCHAR2(7)
USER_STATS	VARCHAR2(3)
DURATION	VARCHAR2(15)
PCT_DIRECT_ACCESS	NUMBER
ITYP_OWNER	VARCHAR2(30)
ITYP_NAME	VARCHAR2(30)
PARAMETERS	VARCHAR2(1000)
GLOBAL_STATS	VARCHAR2(3)
DOMIDX_STATUS	VARCHAR2(12)
DOMIDX_OPSTATUS	VARCHAR2(6)
FUNCIDX_STATUS	VARCHAR2(8)
JOIN_INDEX	VARCHAR2(3)
IOT_REDUNDANT_PKEY_ELIM	VARCHAR2(3)
DROPPED	VARCHAR2(3)

SQL> select owner,index_name,index_type,table_name from dba_indexes;

CONTROL FILES

(Capitolul 6)

1) Informatii despre fisierele de control obtinute din view-ul pentru fisiere

SQL> desc v$controlfile
SQL> select * from v$controlfile;
STATUS

NAME

G:\ORACLE\ORADATA\LEU\CONTROL01.CTL

G:\ORACLE\ORADATA\LEU\CONTROL02.CTL

2) Informatii despre fisierele de control din view-ul pentru parametri

```
SQL> desc v$parameter
 Name                          Null?    Type
 ----------------------------- -------- ----
 NUM                                    NUMBER
 NAME                                   VARCHAR2(64)
 TYPE                                   NUMBER
 VALUE                                  VARCHAR2(512)
 ISDEFAULT                              VARCHAR2(9)
 ISSES_MODIFIABLE                       VARCHAR2(5)
 ISSYS_MODIFIABLE                       VARCHAR2(9)
 ISMODIFIED                             VARCHAR2(10)
 ISADJUSTED                             VARCHAR2(5)
 DESCRIPTION                            VARCHAR2(64)
 UPDATE_COMMENT                         VARCHAR2(255)

SQL> select * from v$parameter where name='control_files';

    NUM NAME                                                 TYPE
--------- ---------------------------------------------------------- ---------
VALUE
--------------------------------------------------------------------------------
ISDEFAULT ISSES ISSYS_MOD ISMODIFIED ISADJ DESCRIPTION
--------- ----- --------- ---------- ----- ----------------------------------------
UPDATE_COMMENT
--------------------------------------------------------------------------------
     219 control_files                                    2
g:\oracle\oradata\leu\CONTROL01.CTL, g:\oracle\oradata\leu\CONTROL02.CTL,
g:\oracle\oradata\leu\CONT
FALSE     FALSE FALSE     FALSE      FALSE control file names list
```

3) Informatii despre numarul inregistrarilor alocate si cele folosite pentru fisierele de control

```
SQL> desc v$controlfile_record_section
 Name                          Null?    Type
 ----------------------------- -------- ----
 TYPE                                   VARCHAR2(20)
 RECORD_SIZE                            NUMBER
 RECORDS_TOTAL                          NUMBER
 RECORDS_USED                           NUMBER
 FIRST_INDEX                            NUMBER
```

```
 LAST_INDEX                     NUMBER
 LAST_RECID                     NUMBER

SQL> select * from v$controlfile_record_section where type='DATAFILE';

TYPE            RECORD_SIZE     RECORDS_TOTAL   RECORDS_USED    FIRST_INDEX
        LAST_INDEX          LAST_RECID
------------------              -----------             ------------            -----------             --
---------       ----------              ----------
DATAFILE                180                     100                     10                      0
          0       1668
```

4) Informatii despre backup-uri facute pe fisierele de control

```
SQL> desc v$backup
 Name                          Null?    Type
 ----------------------------- -------- ----
 FILE#                                  NUMBER
 STATUS                                 VARCHAR2(18)
 CHANGE#                                NUMBER
 TIME                                   DATE

SQL> select * from v$backup;

   FILE# STATUS            CHANGE# TIME
--------- ----------------- --------- ---------
        1 NOT ACTIVE              0
        2 NOT ACTIVE              0
        3 NOT ACTIVE              0
        4 NOT ACTIVE              0
        5 NOT ACTIVE              0
        6 NOT ACTIVE              0
        7 NOT ACTIVE              0
        8 NOT ACTIVE              0
        9 NOT ACTIVE              0
       10 NOT ACTIVE              0

10 rows selected.
```

5) Informatii despre fisierele de date

```
SQL> desc v$datafile
 Name                          Null?    Type
 ----------------------------- -------- ----
 FILE#                                  NUMBER
```

```
CREATION_CHANGE#                NUMBER
CREATION_TIME                   DATE
TS#                             NUMBER
RFILE#                          NUMBER
STATUS                          VARCHAR2(7)
ENABLED                         VARCHAR2(10)
CHECKPOINT_CHANGE#              NUMBER
CHECKPOINT_TIME                 DATE
UNRECOVERABLE_CHANGE#           NUMBER
UNRECOVERABLE_TIME              DATE
LAST_CHANGE#                    NUMBER
LAST_TIME                       DATE
OFFLINE_CHANGE#                 NUMBER
ONLINE_CHANGE#                  NUMBER
ONLINE_TIME                     DATE
BYTES                           NUMBER
BLOCKS                          NUMBER
CREATE_BYTES                    NUMBER
BLOCK_SIZE                      NUMBER
NAME                            VARCHAR2(513)
PLUGGED_IN                      NUMBER
BLOCK1_OFFSET                   NUMBER
AUX_NAME                        VARCHAR2(513)

SQL> select * from v$datafile;
   FILE# CREATION_CHANGE# CREATION_       TS#    RFILE# STATUS  ENABLED
CHECKPOINT_CHANGE# CHECKPOIN
--------- ---------------- --------- --------- --------- ------- ---------- ------------------ -----
NAME
-------------------------------------------------------------------------------------------------
PLUGGED_IN BLOCK1_OFFSET
---------- -------------
AUX_NAME
-------------------------------------------------------------------------------------------------
      1             11 12-MAY-02        0        1 SYSTEM  READ WRITE          48391344 19-OCT-
08                  0
G:\ORACLE\ORADATA\LEU\SYSTEM01.DBF
      0         8192
NONE

      2         187697 12-MAY-02        1        2 ONLINE  READ WRITE          48391344 19-
OCT-08              0
G:\ORACLE\ORADATA\LEU\UNDOTBS01.DBF
      0         8192
NONE
```

```
      3       6283 12-MAY-02       3       3 ONLINE  READ WRITE       48391344 19-OCT-
08               0
G:\ORACLE\ORADATA\LEU\CWMLITE01.DBF
      0       8192
NONE

      4       6302 12-MAY-02       4       4 ONLINE  READ WRITE       48391344 19-OCT-
08               0
G:\ORACLE\ORADATA\LEU\DRSYS01.DBF
      0       8192
NONE

      5       6324 12-MAY-02       5       5 ONLINE  READ WRITE       48391344 19-OCT-
08               0
G:\ORACLE\ORADATA\LEU\EXAMPLE01.DBF
      0       8192
NONE

      6       6343 12-MAY-02       6       6 ONLINE  READ WRITE       48391344 19-OCT-
08               0
G:\ORACLE\ORADATA\LEU\INDX01.DBF
      0       8192
NONE

      7       6363 12-MAY-02       7       7 ONLINE  READ WRITE       48391344 19-OCT-
08               0
G:\ORACLE\ORADATA\LEU\ODM01.DBF
      0       8192
NONE

      8       6382 12-MAY-02       8       8 ONLINE  READ WRITE       48391344 19-OCT-
08               0
G:\ORACLE\ORADATA\LEU\TOOLS01.DBF
      0       8192
NONE

      9       6401 12-MAY-02       9       9 ONLINE  READ WRITE       48391344 19-OCT-
08               0
G:\ORACLE\ORADATA\LEU\USERS01.DBF
      0       8192
NONE

     10       6420 12-MAY-02      10      10 ONLINE  READ WRITE       48391344 19-
OCT-08               0
G:\ORACLE\ORADATA\LEU\XDB01.DBF
      0       8192
```

NONE

10 rows selected.

6) Informatii despre fisierele temporare

```
SQL> desc v$tempfile
 Name                          Null?    Type
 ----------------------------- -------- ----
 FILE#                                  NUMBER
 CREATION_CHANGE#                       NUMBER
 CREATION_TIME                          DATE
 TS#                                    NUMBER
 RFILE#                                 NUMBER
 STATUS                                 VARCHAR2(7)
 ENABLED                                VARCHAR2(10)
 BYTES                                  NUMBER
 BLOCKS                                 NUMBER
 CREATE_BYTES                           NUMBER
 BLOCK_SIZE                             NUMBER
 NAME                                   VARCHAR2(513)

SQL> select * from v$tempfile;

    FILE# CREATION_CHANGE# CREATION_       TS#    RFILE# STATUS  ENABLED
BYTES    BLOCKS CREATE_BYTES BLOC
--------- ---------------- --------- --------- --------- ------- ---------- --------- --------- ----
NAME
--------------------------------------------------------------------------------------------------------
       1                0         2         1 ONLINE  READ WRITE  41943040      5120     41943040
8192
G:\ORACLE\ORADATA\LEU\TEMP01.DBF
```

7) Informatii despre tablespace-uri

```
SQL> desc v$tablespace
 Name                          Null?    Type
 ----------------------------- -------- ----
 TS#                                    NUMBER
 NAME                                   VARCHAR2(30)
 INCLUDED_IN_DATABASE_BACKUP            VARCHAR2(3)

SQL> select * from v$tablespace;

     TS# NAME                           INC
--------- ------------------------------ ---
       3 CWMLITE                        YES
```

```
         4 DRSYS                     YES
         5 EXAMPLE                   YES
         6 INDX                      YES
         7 ODM                       YES
         0 SYSTEM                    YES
         8 TOOLS                     YES
         1 UNDOTBS1                  YES
         9 USERS                     YES
        10 XDB                       YES
         2 TEMP                      YES

11 rows selected.
```

8) Informatii despre baza de date

```
SQL> desc v$database
 Name                          Null?    Type
 ----------------------------- -------- ----
 DBID                                   NUMBER
 NAME                                   VARCHAR2(9)
 CREATED                                DATE
 RESETLOGS_CHANGE#                      NUMBER
 RESETLOGS_TIME                         DATE
 PRIOR_RESETLOGS_CHANGE#                NUMBER
 PRIOR_RESETLOGS_TIME                   DATE
 LOG_MODE                               VARCHAR2(12)
 CHECKPOINT_CHANGE#                     NUMBER
 ARCHIVE_CHANGE#                        NUMBER
 CONTROLFILE_TYPE                       VARCHAR2(7)
 CONTROLFILE_CREATED                    DATE
 CONTROLFILE_SEQUENCE#                  NUMBER
 CONTROLFILE_CHANGE#                    NUMBER
 CONTROLFILE_TIME                       DATE
 OPEN_RESETLOGS                         VARCHAR2(11)
 VERSION_TIME                           DATE
 OPEN_MODE                              VARCHAR2(10)
 PROTECTION_MODE                        VARCHAR2(20)
 PROTECTION_LEVEL                       VARCHAR2(20)
 REMOTE_ARCHIVE                         VARCHAR2(8)
 ACTIVATION#                            NUMBER
 DATABASE_ROLE                          VARCHAR2(16)
 ARCHIVELOG_CHANGE#                     NUMBER
 SWITCHOVER_STATUS                      VARCHAR2(18)
 DATAGUARD_BROKER                       VARCHAR2(8)
 GUARD_STATUS                           VARCHAR2(7)
 SUPPLEMENTAL_LOG_DATA_MIN              VARCHAR2(3)
 SUPPLEMENTAL_LOG_DATA_PK               VARCHAR2(3)
```

```
SUPPLEMENTAL_LOG_DATA_UI        VARCHAR2(3)
FORCE_LOGGING                   VARCHAR2(3)

SQL> select * from v$database;

    DBID NAME      CREATED   RESETLOGS_CHANGE# RESETLOGS
PRIOR_RESETLOGS_CHANGE# PRIOR_RES LOG_MODE
--------- --------- --------- ----------------- --------- ---------------------- --------- --------
CHECKPOINT_CHANGE# ARCHIVE_CHANGE# CONTROL CONTROLFI
CONTROLFILE_SEQUENCE# CONTROLFILE_CHANGE# CONTR
------------------ --------------- ------- --------- -------------------- ------------------- -----
VERSION_T OPEN_MODE  PROTECTION_MODE      PROTECTION_LEVEL     REMOTE_A
ACTIVATION# DATABASE_ROLE    AR
--------- ---------- -------------------- -------------------- -------- ----------- ----------------
SWITCHOVER_STATUS  DATAGUAR GUARD_S SUP SUP SUP FOR
------------------ -------- ------- --- --- --- ---
1.248E+09 LEU       17-MAR-07          190578 17-MAR-07                    1 12-MAY-02
NOARCHIVELOG
        48391344       48301579 CURRENT 17-MAR-07               10100          48391344 19-
OCT-08 NOT ALLOWED
17-MAR-07 READ WRITE MAXIMUM PERFORMANCE  UNPROTECTED         ENABLED
1.248E+09 PRIMARY                       0
SESSIONS ACTIVE    DISABLED NONE    NO  NO  NO  NO
```

REDO LOG FILES

(Cap.7)

1)Informatii despre grupuri si membri

```
SQL> desc v$logfile
 Name                          Null?    Type
 ----------------------------- -------- ----
 GROUP#                                 NUMBER
 STATUS                                 VARCHAR2(7)
 TYPE                                   VARCHAR2(7)
 MEMBER                                 VARCHAR2(513)

SQL> select * from v$logfile;

   GROUP# STATUS  TYPE
--------- ------- -------
MEMBER
--------------------------------------
       3 STALE   ONLINE
E:\ORACLE\ORADATA\LEU\REDO03.LOG

       2         ONLINE
E:\ORACLE\ORADATA\LEU\REDO02.LOG
```

```
      1 STALE   ONLINE
E:\ORACLE\ORADATA\LEU\REDO01.LOG
```

2) Informatii legate de modul de lucru al bazei de date (arhivare sau fara arhivare a fisierelor de log)

```
SQL> desc v$database

Name                          Null?    Type
 ----------------------------- -------- ----
 DBID                                   NUMBER
 NAME                                   VARCHAR2(9)
 CREATED                                DATE
 RESETLOGS_CHANGE#                      NUMBER
 RESETLOGS_TIME                         DATE
 PRIOR_RESETLOGS_CHANGE#                NUMBER
 PRIOR_RESETLOGS_TIME                   DATE
 LOG_MODE                               VARCHAR2(12)
 CHECKPOINT_CHANGE#                     NUMBER
 ARCHIVE_CHANGE#                        NUMBER
 CONTROLFILE_TYPE                       VARCHAR2(7)
 CONTROLFILE_CREATED                    DATE
 CONTROLFILE_SEQUENCE#                  NUMBER
 CONTROLFILE_CHANGE#                    NUMBER
 CONTROLFILE_TIME                       DATE
 OPEN_RESETLOGS                         VARCHAR2(11)
 VERSION_TIME                           DATE
 OPEN_MODE                              VARCHAR2(10)
 PROTECTION_MODE                        VARCHAR2(20)
 PROTECTION_LEVEL                       VARCHAR2(20)
 REMOTE_ARCHIVE                         VARCHAR2(8)
 ACTIVATION#                            NUMBER
 DATABASE_ROLE                          VARCHAR2(16)
 ARCHIVELOG_CHANGE#                     NUMBER
 SWITCHOVER_STATUS                      VARCHAR2(18)
 DATAGUARD_BROKER                       VARCHAR2(8)
 GUARD_STATUS                           VARCHAR2(7)
 SUPPLEMENTAL_LOG_DATA_MIN              VARCHAR2(3)
 SUPPLEMENTAL_LOG_DATA_PK               VARCHAR2(3)
 SUPPLEMENTAL_LOG_DATA_UI               VARCHAR2(3)
 FORCE_LOGGING                          VARCHAR2(3)

SQL> select name,log_mode from v$database;

NAME      LOG_MODE
--------- ------------
```

PBD NOARCHIVELOG

3) Informatii legate de starea instantei si a grupurilor

```
SQL> desc v$thread
 Name                          Null?    Type
 ----------------------------- -------- ----
 THREAD#                               NUMBER
 STATUS                                VARCHAR2(6)
 ENABLED                               VARCHAR2(8)
 GROUPS                                NUMBER
 INSTANCE                              VARCHAR2(16)
 OPEN_TIME                             DATE
 CURRENT_GROUP#                        NUMBER
 SEQUENCE#                             NUMBER
 CHECKPOINT_CHANGE#                    NUMBER
 CHECKPOINT_TIME                       DATE
 ENABLE_CHANGE#                        NUMBER
 ENABLE_TIME                           DATE
 DISABLE_CHANGE#                       NUMBER
 DISABLE_TIME                          DATE
```

```
SQL> select groups, sequence#, instance, status from v$thread;

   GROUPS     SEQUENCE#          INSTANCE             STATUS
---------     ---------          ----------------      ------
        3          951                PBD                OPEN
```

4)Informatii despre starea fisierelor de log

select group#, thread#, sequence#, members, archived, status from v$log;

```
SQL> desc v$log
 Name                          Null?    Type
 ----------------------------- -------- ----
 GROUP#                                NUMBER
 THREAD#                               NUMBER
 SEQUENCE#                             NUMBER
 BYTES                                 NUMBER
 MEMBERS                               NUMBER
 ARCHIVED                              VARCHAR2(3)
 STATUS                                VARCHAR2(16)
 FIRST_CHANGE#                         NUMBER
 FIRST_TIME                            DATE
```

SQL> select group#,members,archived,status from v$log;

```
   GROUP#   MEMBERS      ARC    STATUS
---------          ---------          ---      ----------------
       1             1                NO     INACTIVE
       2             1                NO     CURRENT
       3             1                NO     INACTIVE
```

5) Adaugarea unui membru la un grup (adaugarea unui nou fisier de log)

```
SQL> alter database add logfile member 'e:\temp\log2.rdo' to group 1;

Database altered.
```

6) Stergerea unui membru din grup (stergerea unui fisier de log VALID)

6.1) Se verifica starea fiserului care va fi sters

```
SQL> select * from v$logfile;

   GROUP#     STATUS  TYPE
---------          -------       -------
MEMBER
------------------------------------------------------------
       3             STALE     ONLINE
E:\ORACLE\ORADATA\LEU\REDO03.LOG

       2                          ONLINE
E:\ORACLE\ORADATA\LEU\REDO02.LOG

       1             STALE     ONLINE
E:\ORACLE\ORADATA\LEU\REDO01.LOG

       1             VALID     ONLINE
C:\TEMP\LOG2.RDO
```

6.2) Se sterge fisierul de log (daca este VALID)

```
SQL> alter database drop logfile member 'c:\temp\LOG2.RDO';
```

1

MANAGING TABLESPACES and DATA FILES

(Capitol 8)

1) Crearea unui tablespace permanent ‘UBD’ cu un fisier de date UBD1 cu dimensiunea de 1 M, cu sau fara extensie :

a) cu specificarea tipului si dimensiunea extensiei

```
SQL> CREATE TABLESPACE userdata DATAFILE 'E:/Student /userdata01.dbf’ SIZE 1M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 128K;
```

b) fara specificarea extensiei (implicit AUTOALLOCATE)

```
SQL >create tablespace UBD
datafile 'E:/Student/ubd1.dbf' SIZE 1M;
```

2) Informatii despre tablespace-uri (la nivel de baza de date)

```
SQL> desc DBA_TABLESPACES
Name Null? Type
----------------------------------------- -------- ----------------------
TABLESPACE_NAME NOT NULL VARCHAR2(30)
BLOCK_SIZE NOT NULL NUMBER
INITIAL_EXTENT NUMBER
NEXT_EXTENT NUMBER
MIN_EXTENTS NOT NULL NUMBER
MAX_EXTENTS NUMBER
PCT_INCREASE NUMBER
MIN_EXTLEN NUMBER
STATUS VARCHAR2(9)
CONTENTS VARCHAR2(9)
LOGGING VARCHAR2(9)
FORCE_LOGGING VARCHAR2(3)
EXTENT_MANAGEMENT VARCHAR2(10)
ALLOCATION_TYPE VARCHAR2(9)
PLUGGED_IN VARCHAR2(3)
SEGMENT_SPACE_MANAGEMENT VARCHAR2(6)
SQL> select tablespace_name,block_size,status from DBA_TABLESPACES;
TABLESPACE_NAME BLOCK_SIZE STATUS
------------------------------ ---------- ---------
SYSTEM 8192 ONLINE
UNDOTBS1 8192 ONLINE
TEMP 8192 ONLINE
CWMLITE 8192 ONLINE
DRSYS 8192 ONLINE
EXAMPLE 8192 ONLINE
INDX 8192 ONLINE
ODM 8192 ONLINE
TOOLS 8192 ONLINE
USERS 8192 ONLINE
XDB 8192 ONLINE
BD_DATA 8192 ONLINE
2
BD_TEMP 8192 ONLINE
3) Starea unui tablespace (existent sau sters din baza de date)
SQL> desc V$TABLESPACE
Name Null? Type
----------------------------------------- -------- -----------------
TS# NUMBER
NAME VARCHAR2(30)
INCLUDED_IN_DATABASE_BACKUP VARCHAR2(3)
SQL> select * from V$TABLESPACE;
TS# NAME INC
---------- ------------------------------ ---
3 CWMLITE YES
4 DRSYS YES
5 EXAMPLE YES
```

6 INDX YES
7 ODM YES
0 SYSTEM YES
8 TOOLS YES
1 UNDOTBS1 YES
9 USERS YES
10 XDB YES
2 TEMP YES
12 BD_DATA YES
13 BD_TEMP YES
4) Informatii despre tablespace-uri si fiserele de date aferente (la nivelul bazei de date)
SQL> desc DBA_DATA_FILES;
Name

FILE_NAME
FILE_ID
TABLESPACE_NAME
BYTES
BLOCKS
STATUS
RELATIVE_FNO
AUTOEXTENSIBLE
MAXBYTES
MAXBLOCKS
INCREMENT_BY
USER_BYTES
USER_BLOCKS
SQL> select tablespace_name,file_name,status from DBA_DATA_FILES
TABLESPACE_NAME

3
FILE_NAME

STATUS

SYSTEM
C:\ORACLE\ORADATA\BD\SYSTEM01.DBF
AVAILABLE
UNDOTBS1
C:\ORACLE\ORADATA\BD\UNDOTBS01.DBF
AVAILABLE
CWMLITE
C:\ORACLE\ORADATA\BD\CWMLITE01.DBF
AVAILABLE
DRSYS
C:\ORACLE\ORADATA\BD\DRSYS01.DBF
AVAILABLE
EXAMPLE
C:\ORACLE\ORADATA\BD\EXAMPLE01.DBF

AVAILABLE
INDX
C:\ORACLE\ORADATA\BD\INDX01.DBF
AVAILABLE
ODM
C:\ORACLE\ORADATA\BD\ODM01.DBF
AVAILABLE
TOOLS
C:\ORACLE\ORADATA\BD\TOOLS01.DBF
AVAILABLE
USERS
C:\ORACLE\ORADATA\BD\USERS01.DBF
AVAILABLE
XDB
C:\ORACLE\ORADATA\BD\XDB01.DBF
AVAILABLE
BD_DATA
C:\ORACLE\ORADATA\BD\BD_DATA.ORA
AVAILABLE
5) Informatii despre fisierele de date (la nivel de baza de date)
SQL> desc V$DATAFILE
Name Null? Type
---------- -------- ------
4
FILE# NUMBER
CREATION_CHANGE# NUMBER
CREATION_TIME DATE
TS# NUMBER
RFILE# NUMBER
STATUS VARCHAR2(7)
ENABLED VARCHAR2(10)
CHECKPOINT_CHANGE# NUMBER
CHECKPOINT_TIME DATE
UNRECOVERABLE_CHANGE# NUMBER
UNRECOVERABLE_TIME DATE
LAST_CHANGE# NUMBER
LAST_TIME DATE
OFFLINE_CHANGE# NUMBER
ONLINE_CHANGE# NUMBER
ONLINE_TIME DATE
BYTES NUMBER
BLOCKS NUMBER
CREATE_BYTES NUMBER
BLOCK_SIZE NUMBER
NAME VARCHAR2(513)
PLUGGED_IN NUMBER
BLOCK1_OFFSET NUMBER
AUX_NAME VARCHAR2(513)
SQL> select file#,name,creation_time,status,enabled from V$DATAFILE;

FILE#

NAME

CREATION_ STATUS ENABLED
--------- ------- ----------
1
C:\ORACLE\ORADATA\BD\SYSTEM01.DBF
12-MAY-02 SYSTEM READ WRITE
2
C:\ORACLE\ORADATA\BD\UNDOTBS01.DBF
12-MAY-02 ONLINE READ WRITE
3
C:\ORACLE\ORADATA\BD\CWMLITE01.DBF
12-MAY-02 ONLINE READ WRITE
4
C:\ORACLE\ORADATA\BD\DRSYS01.DBF
12-MAY-02 ONLINE READ WRITE
5
C:\ORACLE\ORADATA\BD\EXAMPLE01.DBF
12-MAY-02 ONLINE READ WRITE
5
6
C:\ORACLE\ORADATA\BD\INDX01.DBF
12-MAY-02 ONLINE READ WRITE
7
C:\ORACLE\ORADATA\BD\ODM01.DBF
12-MAY-02 ONLINE READ WRITE
8
C:\ORACLE\ORADATA\BD\TOOLS01.DBF
12-MAY-02 ONLINE READ WRITE
9
C:\ORACLE\ORADATA\BD\USERS01.DBF
12-MAY-02 ONLINE READ WRITE
10
C:\ORACLE\ORADATA\BD\XDB01.DBF
12-MAY-02 ONLINE READ WRITE
11
C:\ORACLE\ORADATA\BD\BD_DATA.ORA
08-OCT-08 ONLINE READ WRITE
6) Informatii despre fisierele de date temporare la nivel de baza de date
SQL> desc DBA_TEMP_FILES
Name Null? Type
--- -------- ------
FILE_NAME VARCHAR2(513)
FILE_ID NUMBER
TABLESPACE_NAME NOT NULL VARCHAR2(30)
BYTES NUMBER
BLOCKS NUMBER

STATUS CHAR(9)
RELATIVE_FNO NUMBER
AUTOEXTENSIBLE VARCHAR2(3)
MAXBYTES NUMBER
MAXBLOCKS NUMBER
INCREMENT_BY NUMBER
USER_BYTES NUMBER
USER_BLOCKS NUMBER
SQL> select file_name,tablespace_name, status from DBA_TEMP_FILES;
FILE_NAME

TABLESPACE_NAME STATUS
--- ---
C:\ORACLE\ORADATA\BD\TEMP01.DBF
TEMP AVAILABLE
C:\ORACLE\ORADATA\BD\BD_TEMP.ORA
6
BD_TEMP AVAILABLE
7) Informatii despre fisierele temporare la nivel de user
SQL> desc V$TEMPFILE
Name Null? Type
--- --- ---
FILE# NUMBER
CREATION_CHANGE# NUMBER
CREATION_TIME DATE
TS# NUMBER
RFILE# NUMBER
STATUS VARCHAR2(7)
ENABLED VARCHAR2(10)
BYTES NUMBER
BLOCKS NUMBER
CREATE_BYTES NUMBER
BLOCK_SIZE NUMBER
NAME VARCHAR2(513)
SQL> select file#,name, creation_time, status from V$TEMPFILE;
FILE#

NAME

CREATION_ STATUS
--- ---
1
C:\ORACLE\ORADATA\BD\TEMP01.DBF
ONLINE
2
C:\ORACLE\ORADATA\BD\BD_TEMP.ORA
ONLINE

1

STORAGE STRUCTURE
(SEGMENTS AND DATABASE BLOCKS)

(Capitol 9)

1) Informatii despre parametrii si starea unui tablespace

SQL> desc dba_tablespaces;

Name Null? Type

TABLESPACE_NAME NOT NULL VARCHAR2(30)
BLOCK_SIZE NOT NULL NUMBER
INITIAL_EXTENT NUMBER
NEXT_EXTENT NUMBER
MIN_EXTENTS NOT NULL NUMBER
MAX_EXTENTS NUMBER
PCT_INCREASE NUMBER
MIN_EXTLEN NUMBER
STATUS VARCHAR2(9)
CONTENTS VARCHAR2(9)
LOGGING VARCHAR2(9)
FORCE_LOGGING VARCHAR2(3)
EXTENT_MANAGEMENT VARCHAR2(10)
ALLOCATION_TYPE VARCHAR2(9)
PLUGGED_IN VARCHAR2(3)
SEGMENT_SPACE_MANAGEMENT VARCHAR2(6)

SQL> select tablespace_name,block_size,initial_extent,min_extents, max_extents, status
from dba_tablespaces where tablespace_name='PBD_DATA';

TABLESPACE_NAME BLOCK_SIZE INITIAL_EXTENT MIN_EXTENTS MAX_EXTENTS STATUS

PBD_DATA 8192 65536 1 2,147E+09 ONLINE

2) Informatii despre segmentele (obiectele) unui tablespace

SQL> select owner,segment_name,segment_type, tablespace_name, blocks, extents
from dba_segments where owner='SCOTT'and segment_type='TABLE'

OWNER SEGMENT_NAME SEGMENT_TYPE

TABLESPACE_NAME BLOCKS EXTENTS

SCOTT DEPT TABLE
SYSTEM 8 1
SCOTT EMP TABLE
SYSTEM 8 1
SCOTT BONUS TABLE
SYSTEM 8 1
SCOTT SALGRADE TABLE
SYSTEM 8 1

2

3) Informatii despre extensiile segmentelor

SQL> desc dba_extents

Name Null? Type

OWNER VARCHAR2(30)
SEGMENT_NAME VARCHAR2(81)
PARTITION_NAME VARCHAR2(30)

SEGMENT_TYPE VARCHAR2(18)
TABLESPACE_NAME VARCHAR2(30)
EXTENT_ID NUMBER
FILE_ID NUMBER
BLOCK_ID NUMBER
BYTES NUMBER
BLOCKS NUMBER
RELATIVE_FNO NUMBER

SQL> select owner, segment_name, segment_type, tablespace_name, bytes from dba_extents
where owner='SCOTT' and segment_name='EMP';

OWNER SEGMENT_NAME SEGMENT_TYPE TABLESPACE_NAME BYTES
---------- ---------- ---------- ---------- ----------
SCOTT EMP TABLE SYSTEM 65536

SQL>select segment_name, extent_id, file_id,block_id from dba_extents
where owner='SCOTT' and segment_name='EMP' ;

SEGMENT_NAME EXTENT_ID FILE_ID BLOCK_ID
---------- ---------- ---------- ----------
EMP 0 1 50465

4) Informatii despre blocurile libere dintr-un tablespace

SQL> desc dba_free_space
Name Null? Type
---------- -------- ----
TABLESPACE_NAME VARCHAR2(30)
FILE_ID NUMBER
BLOCK_ID NUMBER
BYTES NUMBER
BLOCKS NUMBER
RELATIVE_FNO NUMBER

SQL> select tablespace_name, count(*), max(blocks), sum(blocks) from dba_free_space
group by tablespace_name;

TABLESPACE_NAME COUNT(*) MAX(BLOCKS) SUM(BLOCKS)
---------- ---------- ---------- ----------
CWMLITE 2 1328 1360
DRSYS 1 1320 1320
EXAMPLE 1 19032 19032
INDX 1 3192 3192
3
PBD_DATA 2 166648 166664
ODM 1 1368 1368
SYSTEM 2 12536 12568
TOOLS 1 504 504
UNDOTBS1 10 19960 24264
USERS 1 2736 2736

5) Unificarea spatiilor contigue dintr-un tablespace

SQL> ALTER TABLESPACE PBD COALESCE ;

SQL> select tablespace_name,total_extents,percent_extents_coalesced from dba_free_space_coalesced;

TABLESPACE_NAME TOTAL_EXTENTS PERCENT_EXTENTS_COALESCED
---------- ---------- ----------
SYSTEM 2 100
UNDOTBS1 10 100
CWMLITE 2 100
DRSYS 1 100
EXAMPLE 1 100
INDX 1 100

ODM 1 100
TOOLS 1 100
USERS 1 100
XDB 1 100
PBD_DATA 2 100

1
UNDO SEGMENTS
(Capitol 10)
1) Crearea si stergerea unui segment de rollback
SQL> create rollback segment ubd tablespace BD_DATA
storage (initial 100k next 100k optimal 4M minextents 20 maxextents 100);
Rollback segment created.
SQL> drop rollback segment ubd;
Rollback segment dropped.
2) Informatii din dictionar privind segmentele de rollback
SQL> desc dba_rollback_segs
Name Null? Type
------------------------------ -------- ----
SEGMENT_NAME NOT NULL VARCHAR2(30)
OWNER VARCHAR2(6)
TABLESPACE_NAME NOT NULL VARCHAR2(30)
SEGMENT_ID NOT NULL NUMBER
FILE_ID NOT NULL NUMBER
BLOCK_ID NOT NULL NUMBER
INITIAL_EXTENT NUMBER
NEXT_EXTENT NUMBER
MIN_EXTENTS NOT NULL NUMBER
MAX_EXTENTS NOT NULL NUMBER
PCT_INCREASE NUMBER
STATUS VARCHAR2(16)
INSTANCE_NUM VARCHAR2(40)
RELATIVE_FNO NOT NULL NUMBER
SQL> select segment_name,tablespace_name,owner,status from dba_rollback_segs;
SEGMENT_NAME TABLESPACE_NAME OWNER STATUS
------------------------------ ------------------------------ ------ --------
SYSTEM SYSTEM SYS ONLINE
_SYSSMU1$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU2$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU3$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU4$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU5$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU6$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU7$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU8$ UNDOTBS1 PUBLIC ONLINE
_SYSSMU9$ UNDOTBS1 PUBLIC ONLINE
3) Segmentele folosite de instanta curenta
SQL> desc v$rollname

```
Name Null? Type
------------------------------ -------- ----
USN NUMBER
NAME NOT NULL VARCHAR2(30)
SQL> select * from v$rollname;
2
USN NAME
--------- ------------------------------
0 SYSTEM
1 _SYSSMU1$
2 _SYSSMU2$
3 _SYSSMU3$
4 _SYSSMU4$
5 _SYSSMU5$
6 _SYSSMU6$
7 _SYSSMU7$
8 _SYSSMU8$
9 _SYSSMU9$
10 _SYSSMU10$
```
4) Statistici despre segmentele de rollback
```
SQL> desc v$rollstat
Name Null? Type
------------------------------ -------- ----
USN NUMBER
LATCH NUMBER
EXTENTS NUMBER
RSSIZE NUMBER
WRITES NUMBER
XACTS NUMBER
GETS NUMBER
WAITS NUMBER
OPTSIZE NUMBER
HWMSIZE NUMBER
SHRINKS NUMBER
WRAPS NUMBER
EXTENDS NUMBER
AVESHRINK NUMBER
AVEACTIVE NUMBER
STATUS VARCHAR2(15)
CUREXT NUMBER
CURBLK NUMBER
SQL> select usn, rssize, extents, status from v$rollstat;
USN RSSIZE EXTENTS STATUS
--------- --------- --------- ---------------
0 385024 6 ONLINE
1 1171456 3 ONLINE
2 1171456 3 ONLINE
3 1171456 3 ONLINE
4 1171456 3 ONLINE
```

5 1171456 3 ONLINE
6 1171456 3 ONLINE
7 1171456 3 ONLINE
8 385024 6 ONLINE
9 1171456 3 ONLINE
10 1171456 3 ONLINE
3
5) Informatii despre useri si sesiuni
SQL> desc v$session
Name Null? Type
------------------------------ -------- ----
SADDR RAW(4)
SID NUMBER
SERIAL# NUMBER
AUDSID NUMBER
PADDR RAW(4)
USER# NUMBER
USERNAME VARCHAR2(30)
COMMAND NUMBER
OWNERID NUMBER
TADDR VARCHAR2(8)
LOCKWAIT VARCHAR2(8)
STATUS VARCHAR2(8)
SERVER VARCHAR2(9)
SCHEMA# NUMBER
SCHEMANAME VARCHAR2(30)
OSUSER VARCHAR2(30)
PROCESS VARCHAR2(12)
MACHINE VARCHAR2(64)
TERMINAL VARCHAR2(16)
PROGRAM VARCHAR2(64)
TYPE VARCHAR2(10)
SQL_ADDRESS RAW(4)
SQL_HASH_VALUE NUMBER
PREV_SQL_ADDR RAW(4)
PREV_HASH_VALUE NUMBER
MODULE VARCHAR2(48)
MODULE_HASH NUMBER
ACTION VARCHAR2(32)
ACTION_HASH NUMBER
CLIENT_INFO VARCHAR2(64)
FIXED_TABLE_SEQUENCE NUMBER
ROW_WAIT_OBJ# NUMBER
ROW_WAIT_FILE# NUMBER
ROW_WAIT_BLOCK# NUMBER
ROW_WAIT_ROW# NUMBER
LOGON_TIME DATE
LAST_CALL_ET NUMBER
PDML_ENABLED VARCHAR2(3)

FAILOVER_TYPE VARCHAR2(13)
FAILOVER_METHOD VARCHAR2(10)
FAILED_OVER VARCHAR2(3)
RESOURCE_CONSUMER_GROUP VARCHAR2(32)
PDML_STATUS VARCHAR2(8)
PDDL_STATUS VARCHAR2(8)
PQ_STATUS VARCHAR2(8)
CURRENT_QUEUE_DURATION NUMBER
CLIENT_IDENTIFIER VARCHAR2(64)
4
SQL> select username, sid, saddr from v$session;
USERNAME SID SADDR
------------------------------ --------- --------
1 14A34758
2 14A350C8
3 14A35A38
4 14A363A8
5 14A36D18
6 14A37688
8 14A38968
SYS 9 14A392D8
SCOTT 10 14A39C48
6) Informatii despre tranzactii(adresele tranzactiilor pot fi join-ate cu sesiunile prin ses_addr).
SQL> desc v$transaction
Name Null? Type
------------------------------ -------- ----
ADDR RAW(4)
XIDUSN NUMBER
XIDSLOT NUMBER
XIDSQN NUMBER
UBAFIL NUMBER
UBABLK NUMBER
UBASQN NUMBER
UBAREC NUMBER
STATUS VARCHAR2(16)
START_TIME VARCHAR2(20)
START_SCNB NUMBER
START_SCNW NUMBER
START_UEXT NUMBER
START_UBAFIL NUMBER
START_UBABLK NUMBER
START_UBASQN NUMBER
START_UBAREC NUMBER
SES_ADDR RAW(4)
FLAG NUMBER
SPACE VARCHAR2(3)
RECURSIVE VARCHAR2(3)
NOUNDO VARCHAR2(3)
PTX VARCHAR2(3)

NAME VARCHAR2(256)
PRV_XIDUSN NUMBER
PRV_XIDSLT NUMBER
PRV_XIDSQN NUMBER
PTX_XIDUSN NUMBER
PTX_XIDSLT NUMBER
PTX_XIDSQN NUMBER
DSCN-B NUMBER
DSCN-W NUMBER
USED_UBLK NUMBER
USED_UREC NUMBER
LOG_IO NUMBER
PHY_IO NUMBER
5
CR_GET NUMBER
CR_CHANGE NUMBER
SQL> insert into emp values (999, 'TEST','TRANZACT',1111,sysdate, 100,0,10)
1 row created.
SQL> select addr, xidusn, used_ublk,start_uext, start_ubafil from v$transaction
ADDR XIDUSN USED_UBLK START_UEXT START_UBAFIL
-------- --------- --------- ---------- ------------
143ACE8C 4 1 2 2
ADDR – adresa sesiunii
XIDUSN – nr. segmentului de rollback
USED_UBLK – nr. de blocuri de UNDO generate de tranzactie
START_UEXT- extensia segmentului de rollback pentru care tranzactia a inceput scrierea
START_UBAFIL – fisierul de rollback pentru care tranzactia a inceput scrierea
7) Informatii despre **segmentele temporare de sortare** (folosite in comenzile SQL de sortare)
SQL> desc v$sort_segment
Name Null? Type
------------------------------ -------- ----
TABLESPACE_NAME VARCHAR2(31)
SEGMENT_FILE NUMBER
SEGMENT_BLOCK NUMBER
EXTENT_SIZE NUMBER
CURRENT_USERS NUMBER
TOTAL_EXTENTS NUMBER
TOTAL_BLOCKS NUMBER
USED_EXTENTS NUMBER
USED_BLOCKS NUMBER
FREE_EXTENTS NUMBER
FREE_BLOCKS NUMBER
ADDED_EXTENTS NUMBER
EXTENT_HITS NUMBER
FREED_EXTENTS NUMBER
FREE_REQUESTS NUMBER
MAX_SIZE NUMBER
MAX_BLOCKS NUMBER
MAX_USED_SIZE NUMBER

MAX_USED_BLOCKS NUMBER
MAX_SORT_SIZE NUMBER
MAX_SORT_BLOCKS NUMBER
RELATIVE_FNO NUMBER
SQL> select tablespace_name,max_sort_size,extent_size,max_sort_blocks from v$sort_segment;
TABLESPACE_NAME MAX_SORT_SIZE EXTENT_SIZE MAX_SORT_BLOCKS
------------------------------ ------------ ----------- ---------------
TEMP 1 128 128
8) Informatii despre sesiuni si tablespace-ul in care se afla segmentele temporare de sortare folosite in sesiunea curenta
6
SQL> desc v$sort_usage
Name Null? Type
------------------------------ -------- ----
USERNAME VARCHAR2(30)
USER VARCHAR2(30)
SESSION_ADDR RAW(4)
SESSION_NUM NUMBER
SQLADDR RAW(4)
SQLHASH NUMBER
TABLESPACE VARCHAR2(31)
CONTENTS VARCHAR2(9)
SEGTYPE VARCHAR2(9)
SEGFILE# NUMBER
SEGBLK# NUMBER
EXTENTS NUMBER
BLOCKS NUMBER
SEGRFNO# NUMBER
SQL> select username,user,tablespace,contents,extents,blocks from v$sort_usage;
USERNAME USER TABLESPACE CONTENTS EXTENTS BLOCKS
------------------ ---------------- -------------------- ----------- ------ -------
SYS SCOTT TEMP TEMPORARY 1 128
9) Setarea zonei de memorie utilizata pentru sortare in sesiunea curenta la 10K.
SQL> alter system set sort_area_size=10240 deferred;

1

ADMINISTRAREA TABELELOR

(Capitol 11)

1) Vizualizarea ID-rilor pentru fiecare linie din tabela.
SQL> CREATE TABLE emp_test as select * from scott.emp;
SQL> SELECT rowid, empno, ename FROM emp_test;
2) Alocarea unei extensii la o tabela
ALTER TABLE scott.emp_test
ALLOCATE EXTENT(SIZE 500K
DATAFILE ’e:/DISK3/DATA01.DBF’);
3) Stergerea unei coloane dintr-o tabela
ALTER TABLE scott.emp_test

DROP COLUMN comm
CASCADE CONSTRAINTS CHECKPOINT 1000;
4) Redenumirea unei coloane dintr-o tablela
ALTER TABLE scott.emp_test
RENAME COLUMN sal
TO salary;
5) Dezactivarea unei coloane dintr-o tabela
ALTER TABLE scott.emp_test
SET UNUSED COLUMN comm
CASCADE CONSTRAINTS;
6) Stergerea din dictionar a coloanelor dezactivate dintr-o tabela
ALTER TABLE scott.emp_test
DROP UNUSED COLUMNS CHECKPOINT 1000;
7)
SQL> desc dba_unused_col_tabs;
Name Null? Type
---------- -------- ----------
OWNER NOT NULL VARCHAR2(30)
TABLE_NAME NOT NULL VARCHAR2(30)
COUNT NUMBER
2
SQL> SELECT * FROM dba_unused_col_tabs;
OWNER TABLE_NAME COUNT
---------- ---------- ----------
UBD1 EMP_TEST 1
8) Informatii despre tabelele din baza de date
SQL> desc dba_tables;
Nume Nul? Tip
---------- -------- ----------
OWNER NOT NULL VARCHAR2(30)
TABLE_NAME NOT NULL VARCHAR2(30)
TABLESPACE_NAME VARCHAR2(30)
CLUSTER_NAME VARCHAR2(30)
IOT_NAME VARCHAR2(30)
PCT_FREE NUMBER
PCT_USED NUMBER
INI_TRANS NUMBER
MAX_TRANS NUMBER
INITIAL_EXTENT NUMBER
NEXT_EXTENT NUMBER
MIN_EXTENTS NUMBER
MAX_EXTENTS NUMBER
PCT_INCREASE NUMBER
FREELISTS NUMBER
FREELIST_GROUPS NUMBER
LOGGING VARCHAR2(3)

BACKED_UP VARCHAR2(1)
NUM_ROWS NUMBER
BLOCKS NUMBER
EMPTY_BLOCKS NUMBER
AVG_SPACE NUMBER
CHAIN_CNT NUMBER
AVG_ROW_LEN NUMBER
AVG_SPACE_FREELIST_BLOCKS NUMBER
NUM_FREELIST_BLOCKS NUMBER
DEGREE VARCHAR2(10)
INSTANCES VARCHAR2(10)
CACHE VARCHAR2(5)
TABLE_LOCK VARCHAR2(8)
SAMPLE_SIZE NUMBER
LAST_ANALYZED DATE
PARTITIONED VARCHAR2(3)
IOT_TYPE VARCHAR2(12)
3
TEMPORARY VARCHAR2(1)
SECONDARY VARCHAR2(1)
NESTED VARCHAR2(3)
BUFFER_POOL VARCHAR2(7)
ROW_MOVEMENT VARCHAR2(8)
GLOBAL_STATS VARCHAR2(3)
USER_STATS VARCHAR2(3)
DURATION VARCHAR2(15)
SKIP_CORRUPT VARCHAR2(8)
MONITORING VARCHAR2(3)
CLUSTER_OWNER VARCHAR2(30)
DEPENDENCIES VARCHAR2(8)
SQL>SELECT owner, tablespace_name,table_name FROM dba_tables
WHERE owner = 'SCOTT'
9) Informatii despre obiectele din baza de date
SQL> desc dba_objects
Nume Nul? Tip
---------- -------- ------
OWNER VARCHAR2(30)
OBJECT_NAME VARCHAR2(128)
SUBOBJECT_NAME VARCHAR2(30)
OBJECT_ID NUMBER
DATA_OBJECT_ID NUMBER
OBJECT_TYPE VARCHAR2(18)
CREATED DATE
LAST_DDL_TIME DATE
TIMESTAMP VARCHAR2(19)
STATUS VARCHAR2(7)

TEMPORARY VARCHAR2(1)
GENERATED VARCHAR2(1)
SECONDARY VARCHAR2(1)
SQL> SELECT object_name, created
FROM DBA_OBJECTS
WHERE object_name like 'EMP%' AND owner = 'SCOTT';
OBJECT_NAME CREATED
------------------- ----------
EMP 02-10-2008
EMP1 01-12-2008

ADMINISTRAREA INDECSILOR
(Capitol 12)
1) Crearea unui index de tip B-Tree
.
SQL> CREATE INDEX scott.emp_name_idx
ON scott.emp(ename)
PCTFREE 30
STORAGE(INITIAL 200K NEXT 200K
PCTINCREASE 0 MAXEXTENTS 50)
TABLESPACE bd_data;
2) Crearea unui index de tip BITMAP
.
SQL> CREATE BITMAP INDEX scott.dept_name_idx
ON scott.dept(dname)
PCTFREE 30
STORAGE(INITIAL 200K NEXT 200K
PCTINCREASE 0 MAXEXTENTS 50)
TABLESPACE bd_data;
3) Alocarea unei extensii pentru un index de tip B-Tree
```
SQL> ALTER INDEX emp_name_idx
ALLOCATE EXTENT (SIZE 200K
DATAFILE 'e:/DISK6/indx01.dbf')
```
4) Eliberarea spatiului nealocat pentru un index de tip B-Tree
```
SQL> ALTER INDEX emp_name_idx
DEALLOCATE UNUSED;
```
5) Mutarea unui index in alt tablespace
```
SQL> ALTER INDEX emp_name_idx REBUILD
TABLESPACE SYSTEM;
```
6) Informatii din dictionar despre indecsi
SQL> desc dba_indexes
Name Null? Type
---------------------- --------- -------- ----
OWNER NOT NULL VARCHAR2(30)

INDEX_NAME NOT NULL VARCHAR2(30)
INDEX_TYPE VARCHAR2(27)
TABLE_OWNER NOT NULL VARCHAR2(30)
TABLE_NAME NOT NULL VARCHAR2(30)
TABLE_TYPE VARCHAR2(11)
UNIQUENESS VARCHAR2(9)
COMPRESSION VARCHAR2(8)
PREFIX_LENGTH NUMBER
TABLESPACE_NAME VARCHAR2(30)
INI_TRANS NUMBER
MAX_TRANS NUMBER
INITIAL_EXTENT NUMBER
NEXT_EXTENT NUMBER
MIN_EXTENTS NUMBER
MAX_EXTENTS NUMBER
PCT_INCREASE NUMBER
PCT_THRESHOLD NUMBER
INCLUDE_COLUMN NUMBER
FREELISTS NUMBER
FREELIST_GROUPS NUMBER
PCT_FREE NUMBER
LOGGING VARCHAR2(3)
BLEVEL NUMBER
LEAF_BLOCKS NUMBER
DISTINCT_KEYS NUMBER
AVG_LEAF_BLOCKS_PER_KEY NUMBER
AVG_DATA_BLOCKS_PER_KEY NUMBER
CLUSTERING_FACTOR NUMBER
STATUS VARCHAR2(8)
NUM_ROWS NUMBER
SAMPLE_SIZE NUMBER
LAST_ANALYZED DATE
DEGREE VARCHAR2(40)
INSTANCES VARCHAR2(40)
PARTITIONED VARCHAR2(3)
TEMPORARY VARCHAR2(1)
GENERATED VARCHAR2(1)
SECONDARY VARCHAR2(1)
BUFFER_POOL VARCHAR2(7)
USER_STATS VARCHAR2(3)
DURATION VARCHAR2(15)
PCT_DIRECT_ACCESS NUMBER
ITYP_OWNER VARCHAR2(30)
ITYP_NAME VARCHAR2(30)
PARAMETERS VARCHAR2(1000)
GLOBAL_STATS VARCHAR2(3)

DOMIDX_STATUS VARCHAR2(12)
DOMIDX_OPSTATUS VARCHAR2(6)
FUNCIDX_STATUS VARCHAR2(8)
JOIN_INDEX VARCHAR2(3)
SQL> SELECT index_name, index_type, table_name, status from dba_indexes
where owner='SCOTT' ;
INDEX_NAME INDEX_TYPE TABLE_NAME STATUS
---------- ---------- ---------- -------
DECIZII_PRIM NORMAL DECIZII VALID
DEPT_NAME_IDX BITMAP DEPT VALID
EMP_NAME_IDX NORMAL EMP VALID
PK_DEPT NORMAL DEPT VALID
PK_EMP NORMAL EMP VALID
PK_FUN NORMAL FUNCTII1 VALID
PK_INT NORMAL INTRARI_GESTIUNE VALID
PK_STOC NORMAL STOCURI VALID
7) Informatii din dictionar despre coloanele indecsilor
SQL> desc dba_ind_columns
Name Null? Type
---------- -------- ----
INDEX_OWNER NOT NULL VARCHAR2(30)
INDEX_NAME NOT NULL VARCHAR2(30)
TABLE_OWNER NOT NULL VARCHAR2(30)
TABLE_NAME NOT NULL VARCHAR2(30)
COLUMN_NAME VARCHAR2(4000)
COLUMN_POSITION NOT NULL NUMBER
COLUMN_LENGTH NOT NULL NUMBER
CHAR_LENGTH NUMBER
DESCEND VARCHAR2(4)
SQL> SELECT index_name, table_owner, table_name, column_name
from dba_ind_columns
where index_owner='SCOTT'
INDEX_NAME TABLE_OWNER TABLE_NAME COLUMN_NAME
---------- ---------- - ---------- ----------
DEPT_NAME_IDX SCOTT DEPT DNAME
EMPNAME_IDX SCOTT EMP ENAME
PK_COMP SCOTT COMPONENTE COD_COMP
PK_COMP SCOTT COMPONENTE PRET
PK_DEPT SCOTT DEPT DEPTNO
PK_EMP SCOTT EMP EMPNO
PK_INT SCOTT INTRARI_GESTIUNE NR_DOC_IN
PK_INT SCOTT INTRARI_GESTIUNE DATA_DOC_IN
PK_INT SCOTT INTRARI_GESTIUNE COD_PRODUS
PK_INT SCOTT INTRARI_GESTIUNE COD_UM
PK_STOC SCOTT STOCURI COD_COMP
PK_STOC SCOTT STOCURI PRET
PK_STOC SCOTT STOCURI DATA_STOC
8) Startarea si stoparea monitorizarii unui index
SQL> ALTER INDEX emp_name_idx
MONITORING USAGE
SQL> ALTER INDEX emp_name_idx

NOMONITORING USAGE
9) Informatii din dictionar despre indecsii monitorizati
SQL> desc v$object_usage
Name Null? Type
------------------------------ -------- ----
INDEX_NAME NOT NULL VARCHAR2(30)
TABLE_NAME NOT NULL VARCHAR2(30)
MONITORING VARCHAR2(3)
USED VARCHAR2(3)
START_MONITORING VARCHAR2(19)
END_MONITORING VARCHAR2(19)
SQL> select * from v$object_usage;
INDEX_NAME TABLE_NAME MON USE START_MONITORING END_MONITORING
------------------------------ ------------------------- --- --- ------------------- -------------------
EMPNAME_IDX EMP NO NO 12/07/2008 15:38:30 12/07/2008 15:41:26
10) Startarea analizei structurii unui index
SQL> ANALYZE INDEX emp_name_idx VALIDATE STRUCTURE
11) Informatii din dictionar despre starea indecsilor
SQL> desc index_stats
Name Null? Type
------------------------------ -------- ----
HEIGHT NUMBER
BLOCKS NUMBER
NAME VARCHAR2(30)
PARTITION_NAME VARCHAR2(30)
LF_ROWS NUMBER
LF_BLKS NUMBER
LF_ROWS_LEN NUMBER
LF_BLK_LEN NUMBER
BR_ROWS NUMBER
BR_BLKS NUMBER
BR_ROWS_LEN NUMBER
BR_BLK_LEN NUMBER
DEL_LF_ROWS NUMBER
DEL_LF_ROWS_LEN NUMBER
DISTINCT_KEYS NUMBER
MOST_REPEATED_KEY NUMBER
BTREE_SPACE NUMBER
USED_SPACE NUMBER
PCT_USED NUMBER
ROWS_PER_KEY NUMBER
BLKS_GETS_PER_ACCESS NUMBER
PRE_ROWS NUMBER
PRE_ROWS_LEN NUMBER
OPT_CMPR_COUNT NUMBER
OPT_CMPR_PCTSAVE NUMBER
SQL> SELECT name, blocks, used_space, pct_used,

distinct_keys,lf_rows, del_lf_rows
FROM index_stats ;

NAME	BLOCKS	USED_SPACE	PCT_USED	DISTINCT_KEYS	LF_ROWS	DEL_LF_ROWS
EMPNAME_IDX	32	409	6	23	23	0