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
```