

STORAGE STRUCTURE
(SEGMENTS and DATABASE BLOCKS)
(Cap. 9)

1) Informatii despre starea unui tablespace si parametrii specifici blocurilor 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,initial_extent,min_extents, max_extents, status
from dba_tablespaces where tablespace_name='BD_DATA';

TABLESPACE_NAME	BLOCK_SIZE	INITIAL_EXTENT	MIN_EXTENTS	MAX_EXTENTS	STATUS
BD_DATA	8192	65536	1	2,147E+09	ONLINE

2) Informatii despre un tablespace, fisierul de date alocat, numarul total de blocuri si dimensiunea lor

SQL> select tablespace_name, file_id, file_name, blocks, bytes from dba_data_files
where tablespace_name='USERS';

TABLESPACE_NAME	FILE_ID	FILE_NAME	BLOCKS	BYTES
USERS	4	F:\ORA10G_DB\PRODUCT\10.2.0\ORADATA\UPB\USERS01.DBF	800	6553600

3) Informatii despre segmentele de tip tabela create intr-un 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

4) Informatii despre dimensiunea extensiilor alocate unui segment

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, blocks from dba_extents
where owner='SCOTT' and segment_name='EMP';

OWNER	SEGMENT_NAME	SEGMENT_TYPE	TABLESPACE_NAME	BYTES	BLOCKS
SCOTT	EMP	TABLE	SYSTEM	65536	8

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

SEGMENT_NAME	EXTENT_ID	FILE_ID	BLOCK_ID	BLOCKS
EMP	0	1	50465	8

5) Informatii despre tablespace, fisierul de date alocat, numarul de blocuri si spatiul liber in fiecare bloc

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 * from dba_free_space where tablespace_name='USERS' ;

TABLESPACE_NAME	FILE_ID	BLOCK_ID	BYTES	BLOCKS	RELATIVE_FNO
USERS	4	777	65536	8	4
USERS	4	785	65536	8	4
USERS	4	769	65536	8	4

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
PBD_DATA	2	166648	166664
ODM	1	1368	1368
SYSTEM	2	12536	12568
TOOLS	1	504	504
UNDOTBS1	10	19960	24264
USERS	3	2736	2736

6) Unificarea spatiilor contighe dintr-un tablespace(defragmentare)

SQL> desc dba_free_space_coalesced

Name	Null?	Type
TABLESPACE_NAME		VARCHAR2(30)
TOTAL_EXTENTS		NUMBER
EXTENTS_COALESCED		NUMBER
PERCENT_EXTENTS_COALESCED		NUMBER
TOTAL_BYTES		NUMBER
BYTES_COALESCED		NUMBER
TOTAL_BLOCKS		NUMBER
BLOCKS_COALESCED		NUMBER
PERCENT_BLOCKS_COALESCED		NUMBER

SQL> ALTER TABLESPACE BD 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
TOOLS	1	100
USERS	1	100
XDB	1	100
BD_DATA	2	100