

## 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;
```

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

## 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)

```
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

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
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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

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;