[http://docs.oracle.com/cd/E11882\_01/server.112/e25494/repair.htm#ADMIN11816](http://docs.oracle.com/cd/E11882_01/server.112/e25494/repair.htm" \l "ADMIN11816)

1 dbv工具，从物理存储结构上验证坏块

DB\_VERIFY utility

DBVERIFY is an external command-line utility that performs a physical data structure integrity check.

DBVERIFY can be used on offline or online databases,

dbv file=/u02/app/oracle/tbs\_block\_corrupt01.dbf blocksize=8192

dbv file=+DATA/orcl/datafile/users.259.867775091   blocksize=8192 userid=sys/oracle logfile=/tmp/dbv.log  --如果验证asm diskgroup中的datafile，需要userid参数

Pages--表示数据块

Total Pages Examined = 表示文件中的数据块总数量

Total Pages Processed = 表示已检查数据块的数量（格式化使用的数据块）

Total Pages Failing (Data) = 常规检查失败的数据块数量

Total Pages Failing (Index) = 常规检查失败的索引块数量

Total Pages Marked Corrupt = 块头不可用的数据库数量，表示数据块已损坏

Total Pages Influx = 表示同一时间正在读和写的数据块数量。如果数据库是打开状态，当DBV运行时多次读数据块得到一个一致的映像，但是因为数据库是打开的，可能同一数据块在读的时候又有写入的动作，DBV不能得到一个一致的数据块映像

示例

$ dbv file=/u02/app/oracle/tbs\_block\_corrupt01.dbf blocksize=8192

DBVERIFY: Release 11.2.0.3.0 - Production on Wed Apr 12 12:07:19 2017

Copyright (c) 1982, 2011, Oracle and/or its affiliates.  All rights reserved.

DBVERIFY - Verification starting : FILE = /u02/app/oracle/tbs\_block\_corrupt01.dbf

Page 131 is marked corrupt

Corrupt block relative dba: 0x01800083 (file 6, block 131)

Completely zero block found during dbv:

DBVERIFY - Verification complete

Total Pages Examined         : 1280

Total Pages Processed (Data) : 1

Total Pages Failing   (Data) : 0

Total Pages Processed (Index): 1

Total Pages Failing   (Index): 0

Total Pages Processed (Other): 133

Total Pages Processed (Seg)  : 0

Total Pages Failing   (Seg)  : 0

Total Pages Empty            : 1144

Total Pages Marked Corrupt   : 1

Total Pages Influx           : 0

Total Pages Encrypted        : 0

Highest block SCN            : 1381500 (0.1381500)

2 ANALYZE TABLE sql语句，从逻辑存储结构验证坏块，验证逻辑对象的结构完整性

ANALYZE TABLE SQL statement

Used with the VALIDATE STRUCTURE option, the ANALYZE TABLE statement verifies the integrity of the structure of an index, table, or cluster; checks or verifies that tables and indexes are synchronized.

analyze table HR.EMP validate structure cascade;

示例

SQL> analyze table HR.EMP validate structure cascade;

analyze table HR.EMP validate structure cascade

\*

ERROR at line 1:

ORA-01578: ORACLE data block corrupted (file # 6, block # 131)

ORA-01110: data file 6: '/u02/app/oracle/tbs\_block\_corrupt01.dbf'

3 DBMS\_REPAIR PL/SQL package

Performs block checking for a specified table, partition, or index. It populates a repair table with results.

4 DB\_BLOCK\_CHECKING initialization parameter

When DB\_BLOCK\_CHECKING=TRUE, corrupt blocks are identified before they are marked corrupt. Checks are performed when changes are made to a block.

5 rman命令

rman配合动态性能视图V$DATABASE\_BLOCK\_CORRUPTION，查询出所有的坏块及影响的对象

V$DATABASE\_BLOCK\_CORRUPTION displays information about database blocks that were corrupted after the last backup.

run {

validate datafile 6;

validate database;

}

run {

backup check logical validate database;

}

This command is not doing a backup but checking the database for corruption

SQL> select \* from v$database\_block\_corruption;

     FILE#     BLOCK#      BLOCKS CORRUPTION\_CHANGE# CORRUPTIO

---------- ---------- ---------- ------------------ ---------

     6      131           1          0 ALL ZERO

**运行以下 sql 查询，以确定坏块块是位于那个对象中或此块没有被使用**

set pagesize 2000

set linesize 280  
SELECT e.owner, e.segment\_type, e.segment\_name, e.partition\_name, c.file#  
     , greatest(e.block\_id, c.block#) corr\_start\_block#  
     , least(e.block\_id+e.blocks-1, c.block#+c.blocks-1) corr\_end\_block#  
     , least(e.block\_id+e.blocks-1, c.block#+c.blocks-1)  
       - greatest(e.block\_id, c.block#) + 1 blocks\_corrupted  
     , corruption\_type description  
  FROM dba\_extents e, v$database\_block\_corruption c  
 WHERE e.file\_id = c.file#  
   AND e.block\_id <= c.block# + c.blocks - 1  
   AND e.block\_id + e.blocks - 1 >= c.block#  
UNION  
SELECT s.owner, s.segment\_type, s.segment\_name, s.partition\_name, c.file#  
     , header\_block corr\_start\_block#  
     , header\_block corr\_end\_block#  
     , 1 blocks\_corrupted  
     , corruption\_type||' Segment Header' description  
  FROM dba\_segments s, v$database\_block\_corruption c  
 WHERE s.header\_file = c.file#  
   AND s.header\_block between c.block# and c.block# + c.blocks - 1  
UNION  
SELECT null owner, null segment\_type, null segment\_name, null partition\_name, c.file#  
     , greatest(f.block\_id, c.block#) corr\_start\_block#  
     , least(f.block\_id+f.blocks-1, c.block#+c.blocks-1) corr\_end\_block#  
     , least(f.block\_id+f.blocks-1, c.block#+c.blocks-1)  
       - greatest(f.block\_id, c.block#) + 1 blocks\_corrupted  
     , 'Free Block' description  
  FROM dba\_free\_space f, v$database\_block\_corruption c  
 WHERE f.file\_id = c.file#  
   AND f.block\_id <= c.block# + c.blocks - 1  
   AND f.block\_id + f.blocks - 1 >= c.block#

order by file#, corr\_start\_block#;

OWNER                   SEGMENT\_TYPE      SEGMENT\_NAME             PARTITION\_NAME            FILE# CORR\_START\_BLOCK# CORR\_END\_BLOCK# BLOCKS\_CORRUPTED DESCRIPTION

------------------------------ ------------------ ------------------------------ ------------------------------ ---------- ----------------- --------------- ---------------- ------------------------

HR                   TABLE          EMP                               6         131         131            1 ALL ZERO

注意：

版本是10g，不支持rman的validate database命令，可以用 backup check logical validate database，但这需要打开归档模式。

非归档模式下，只能用dbv去列出坏块了。

sqlplus / as sysdba

select 'dbv file='||name from v$datafile;