Monitor database

# Kiểm tra thông tin hệ thống

* + - * Kiểm tra thông tin hệ thống

# uname –a

Linux rhel6 2.6.32-431.el6.x86\_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86\_64 x86\_64 x86\_64 GNU/Linux

* + - * Kiểm tra phiên bản hệ điều hành:

# more /etc/redhat-release

Red Hat Enterprise Linux Server release 6.5 (Santiago)

* + - * Kiểm tra dung lượng các phân vùng của hệ thống

# df –h

Filesystem Size Used Avail Use% Mounted on

/dev/sda2 18G 2.5G 15G 15% /

tmpfs 754M 391M 363M 52% /dev/shm

/dev/sda1 291M 34M 242M 13% /boot

/dev/sdb1 20G 15G 4.2G 78% /u01

* + - * Kiểm tra RAM

# cat /proc/meminfo | grep MemTotal

MemTotal: 65932788 kB

* + - * Kiểm tra Swap

# cat /proc/swaps

Filename Type Size Used Priority

/dev/sda3 partition 134217720 0 -1

* + - * Kiểm tra tempory

# df -h /tmp

Filesystem Size Used Avail Use% Mounted on

/dev/sda8 7.9G 147M 7.4G 2% /tmp

* + - * Kiểm tra các địa chỉ IP

# ifconfig

eth0 Link encap:Ethernet HWaddr 00:0C:29:A4:BC:5F

inet addr:192.168.2.15 Bcast:192.168.2.255 Mask:255.255.255.0

eth1 Link encap:Ethernet HWaddr 00:0C:29:A4:BC:69

inet addr:192.168.74.134 Bcast:192.168.74.255 Mask:255.255.255.0

...

* + - * Kiểm tra các tiến trình các DB đang chạy

# ps -ef|grep smon

oracle 2538 1 0 10:33 ? 00:00:00 ora\_smon\_db01

root 2692 2630 0 10:42 pts/0 00:00:00 grep smon

* + - * Kiểm tra thông tin ORACLE\_HOME

$ echo $ORACLE\_HOME

/u01/app/oracle/product/11.2.0/dbhome\_1

# Kiểm tra thông tin database

* + - 1. Phiên bản của Database

$ sqlplus / as sysdba

SQL\*Plus: Release 11.2.0.3.0 Production on Thu Jan 29 10:51:22 2015

Connected to:

Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production

With the Partitioning, OLAP, Data Mining and Real Application Testing options

* + - 1. Tên database,instance, services

SQL> show parameter name

NAME TYPE VALUE

------------------------------------ ----------- --------db\_file\_name\_convert string

db\_name string db01

db\_unique\_name string db01

instance\_name string db01

service\_names string db01

* + - 1. Dung lượng memories

SQL> show parameter target

NAME TYPE VALUE

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

archive\_lag\_target integer 0

db\_flashback\_retention\_target integer 1440

fast\_start\_io\_target integer 0

fast\_start\_mttr\_target integer 0

memory\_max\_target big integer 604M

memory\_target big integer 604M

parallel\_servers\_target integer 16

pga\_aggregate\_target big integer 0

sga\_target big integer 0

* + - 1. Kiểm tra role và trạng thái của database

SQL> select OPEN\_MODE, DATABASE\_ROLE from v$database;

OPEN\_MODE DATABASE\_ROLE

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

READ WRITE PRIMARY

* + - 1. Kiểm tra thông tin spfile

SQL> show parameter spfile

NAME TYPE VALUE

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

spfile string ...

* + - 1. Kiểm tra thông tin controlfile

SQL> show parameter control\_files;

NAME TYPE VALUE

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

control\_files string ...

* + - 1. Thông tin các tablespace và datafile

SQL> COMPUTE SUM OF using\_mbytes ON tablespace\_name

COMPUTE SUM OF free\_mbytes ON tablespace\_name

COLUMN tablespace\_name FORMAT a20

COLUMN file\_name FORMAT a50

COLUMN using\_mbytes FORMAT 9,999,999,999

COLUMN free\_mbytes FORMAT 9,999,999,999

SELECT a.tablespace\_name, a.file\_name, a.bytes/1024/1024 using\_mbytes, b.free\_bytes/1024/1024 free\_mbytes

FROM dba\_data\_files a,

(SELECT file\_id, SUM(bytes) free\_bytes

FROM dba\_free\_space b GROUP BY file\_id) b

WHERE a.file\_id=b.file\_id

ORDER BY a.tablespace\_name;

* + - 1. Thông tin về redolog

SQL> col GROUP# for 9

col MEMBER for a50

SELECT DISTINCT a.group#, a.member, b.bytes/1024/1024,b.THREAD#

FROM gv$logfile a, gv$log b

WHERE a.group# = b.group#;

GROUP# MEMBER B.BYTES/1024/1024 THREAD#

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

2 /u01/app/oracle/oradata/db01/redo02.log 50 1

3 /u01/app/oracle/oradata/db01/redo03.log 50 1

1 /u01/app/oracle/oradata/db01/redo01.log 50 1

* + - 1. Chế độ archive log, nơi lưu trữ archive log file

SQL> archive log list;

Database log mode Archive Mode

Automatic archival Enabled

Archive destination USE\_DB\_RECOVERY\_FILE\_DEST

Oldest online log sequence 1

Next log sequence to archive 3

Current log sequence 3

* + - 1. Kiểm tra thông tin FRA

SQL> show parameter recovery

NAME TYPE VALUE

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

db\_recovery\_file\_dest string /u01/app/oracle/fast\_recovery\_area

db\_recovery\_file\_dest\_size big integer 4122M

recovery\_parallelism integer 0

* + - 1. Xem thông tin ASM
      * Nếu Database sử dụng ASM

[oracle@oel61 ~]$ export ORACLE\_SID="+ASM"

[oracle@oel61 ~]$ sqlplus / as sysdba

**V$ASM\_DISK**

**V$ASM\_DISKGROUP**

**V$ASM\_USER**

* + - 1. Xem alert log:

SQL> col Name for a25

col VALUE for a100

SELECT \* FROM V$DIAG\_INFO;

NAME VALUE

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

Diag Enabled TRUE

ADR Base /u01/app/oracle

ADR Home /u01/app/oracle/diag/rdbms/orcl/orcl

Diag Trace /u01/app/oracle/diag/rdbms/orcl/orcl/trace

Diag Alert /u01/app/oracle/diag/rdbms/orcl/orcl/alert

Diag Incident /u01/app/oracle/diag/rdbms/orcl/orcl/incident

Diag Cdump /u01/app/oracle/diag/rdbms/orcl/orcl/cdump

Health Monitor /u01/app/oracle/diag/rdbms/orcl/orcl/hm

Default Trace File /u01/app/oracle/diag/.../trace/orcl\_ora\_11424.trc

Active Problem Count 3

Active Incident Count 8

# Các vấn đề về hoạt động của database

## Xem thông tin cluster

[grid@racnode3 ~]$ crsctl check crs

CRS-4638: Oracle High Availability Services is online

CRS-4537: Cluster Ready Services is online

CRS-4529: Cluster Synchronization Services is online

CRS-4533: Event Manager is online

#Check Clusterware Resources

[grid@racnode3 ~]$ crs\_stat -t -v

#Check Cluster Nodes

[grid@racnode3 ~]$ olsnodes -n

racnode1 1

racnode2 2

racnode3 3

#Check ASM for Oracle Clusterware Files

[grid@racnode3 ~]$ srvctl status asm -a

ASM is running on racnode3,racnode1,racnode2

ASM is enabled.

#Check Oracle Cluster Registry (OCR)

[grid@racnode3 ~]$ ocrcheck

#Check Voting Disk

[grid@racnode3 ~]$ crsctl query css votedisk

## STATE File Universal Id File Name Disk group

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

1. ONLINE 7fe9ad5212f84fb5bf48192cede68454 (ORCL:CRSVOL1) [CRS]

Located 1 voting disk(s).

#Check database information

[grid@racnode3 ~]$ srvctl config database -d racdb

Database unique name: racdb

Database name: racdb

Oracle home: /u01/app/oracle/product/11.2.0/dbhome\_1

Oracle user: oracle

Spfile: +DATA/racdb/spfileracdb.ora

Domain:

Start options: open

Stop options: immediate

Database role: PRIMARY

Management policy: AUTOMATIC

Server pools: racdb

Database instances: racdb1,racdb2

Disk Groups: DATA,FRA

Services:

Database is administrator managed

## Tối ưu hóa câu lệnh SQL

* + - * Set line, page, column

#Set độ rộng cho dòng:

SET linesize 150

#Set độ rộng cho page:

SET pagesize 80

#Set độ rộng cho column

col file\_name format a50

* + - * Làm thế nào SQL chạy tốt nhất
        + Sử dụng sql advisor, access advisor để xem các lệnh sql cần tuning
        + Phân biệt tác dụng của hai công cụ này.
        + Sử dụng AWR để xem top các câu lệnh tải cao.

## Lock conflict: Tìm lock, tìm session, resolve lock.

* + - * Xem lock:

**Session 1: update**

SQL> update duong.test set name='d3' where id=3;

1 row updated.

Ko commit.

**Session 2: update vào row đang bị khóa**

SQL> update duong.test set name='a3' where id=3;

(treo)

**Session 3: - Thực hiện kiểm tra lock và kill transaction**

# Kiểm tra lock

SQL> set linesize 300

SQL> SELECT INST\_ID,DECODE(request,0,'Holder: ','Waiter: ') ||sid sess, id1, id2, lmode, request, type

FROM GV$LOCK WHERE (id1, id2, type) IN (SELECT id1, id2, type FROM GV$LOCK WHERE request > 0)

ORDER BY id1, request;

INST\_ID SESS ID1 ID2 LMODE REQUEST TY

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

1 Holder: 46 131086 700 6 0 TX

1 Waiter: 51 131086 700 0 6 TX

#Kiểm tra user và ứng dụng gây ra lock

SQL> Select username,terminal,program from v$session where sid=46;

USERNAME TERMINAL PROGRAM

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

TATC\_APP pts/1 sqlplus@oraserver (TNS V1-V3)

SQL> SELECT sid,serial# from v$session where sid=46;

SID SERIAL#

--- --------

46 18819

#Thực hiện kill session Holder

SQL> ALTER SYSTEM KILL SESSION 'sid, serial#' IMMEDIATE; ;

* + - * Hoặc xem lock:

SQL> SELECT l.session\_id||','||v.serial# sid\_serial, v.osuser,v.MACHINE,v.PROGRAM,v.LOGON\_TIME,

l.ORACLE\_USERNAME ora\_user,

o.object\_name,

o.object\_type,

DECODE(l.locked\_mode,

0, 'None',

1, 'Null',

2, 'Row-S (SS)',

3, 'Row-X (SX)',

4, 'Share',

5, 'S/Row-X (SSX)',

6, 'Exclusive',

TO\_CHAR(l.locked\_mode)

) lock\_mode,

o.status,

to\_char(o.last\_ddl\_time,'dd.mm.yy') last\_ddl

FROM dba\_objects o,v$locked\_object l, v$session v

WHERE o.object\_id = l.object\_id

and l.SESSION\_ID=v.sid

order by 2,3;

## Theo dõi các process, số process, số session, resource hiện tại của hệ thống:

* + - * Sử dụng khi nào: Theo dõi hiện trạng của hệ thống so với mức cấu hình lớn nhất, so với mức đã đạt max. Nếu thường xuyên theo dõi: Tải của hệ thống thường xuyên đạt ngưỡng nào. Giúp DBA có dữ liệu để tuning, reporting. Tìm nguyên nhân và khắc phục lỗi.

SQL> Set line 200

SQL> Select \* from v$resource\_limit;

SQL> Show parameter session

SQL> Show parameter processes

SQL> Alter system set processes =1000 scope=spfile;

* + - * Xem Các session đang kết nối đến DB, lấy tên máy, program,…:

SQL> Select sid, serial#, machine, program, state from v$session;

* + - * Xem Long transaction:

SQL> col OPNAME for a30

SQL> select OPNAME,SOFAR/TOTALWORK\*100 PCT, trunc(TIME\_REMAINING/60) MIN\_RESTANTES,

trunc(ELAPSED\_SECONDS/60) MIN\_ATEAGORA

from v$session\_longops where TOTALWORK>0 order by pct asc;

Dung lượng từng Tablespace :

SQL> select ts.name, sum(df.bytes/1024/1024) from v$tablespace ts, v$datafile df where ts.TS#=df.TS# group by ts.name;

## Monitor, Tuning RMAN

* + - * Monitor

SQL> COLUMN CLIENT\_INFO FORMAT a30

SQL> COLUMN SID FORMAT 999

SQL> COLUMN SPID FORMAT 9999

# Xem các tiến trình RMAN

SQL> SELECT s.sid, p.spid, s.client\_info

FROM v$process p, v$session s

WHERE p.addr = s.paddr

AND CLIENT\_INFO LIKE 'rman%';

# Xem tỉ lệ % công việc thực hiện tren RMAN

SQL> SELECT OPNAME, CONTEXT, SOFAR, TOTALWORK,

ROUND(SOFAR/TOTALWORK\*100,2) "%\_COMPLETE"

FROM V$SESSION\_LONGOPS

WHERE OPNAME LIKE 'RMAN%'

AND OPNAME NOT LIKE '%aggregate%'

AND TOTALWORK != 0

AND SOFAR <> TOTALWORK;

## Lấy AWR

* + - * Sript lấy AWR bằng tay

SQL> BEGIN

DBMS\_WORKLOAD\_REPOSITORY.CREATE\_SNAPSHOT ();

END;

* + - * Ví dụ:

SQL> desc chien.test;

Name Null? Type

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

ID NUMBER

GROUP\_ID NOT NULL NUMBER

CREATED\_AT NOT NULL DATE

TEXT NOT NULL VARCHAR2(50)

NUM NUMBER(2)

SQL> insert into chien.test values (29, 19, sysdate, 'tttest awr', 1);

1 row created.

SQL> commit;

Commit complete.

SQL> BEGIN

2 DBMS\_WORKLOAD\_REPOSITORY.CREATE\_SNAPSHOT ();

3 END;

4 /

PL/SQL procedure successfully completed.

SQL> @$ORACLE\_HOME/rdbms/admin/awrrpt.sql

Current Instance

~~~~~~~~~~~~~~~~

DB Id DB Name Inst Num Instance

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

2582268585 TESTDB 1 testdb

Specify the Report Type

~~~~~~~~~~~~~~~~~~~~~~~

Would you like an HTML report, or a plain text report?

Enter 'html' for an HTML report, or 'text' for plain text

Defaults to 'html'

Enter value for report\_type:

Type Specified: html

Instances in this Workload Repository schema

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

DB Id Inst Num DB Name Instance Host

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

\* 2582268585 1 TESTDB testdb db01.perform

ancetest

Using 2582268585 for database Id

Using 1 for instance number

Specify the number of days of snapshots to choose from

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Entering the number of days (n) will result in the most recent

(n) days of snapshots being listed. Pressing <return> without

specifying a number lists all completed snapshots.

Enter value for num\_days: 3

Listing the last 3 days of Completed Snapshots

Instance DB Name Snap Id Snap Started Snap Level

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

testdb TESTDB 8071 30 Nov 2013 08:00 1

8072 30 Nov 2013 10:00 1

8073 30 Nov 2013 11:00 1

8074 30 Nov 2013 11:15 1

8075 30 Nov 2013 11:17 1

Specify the Begin and End Snapshot Ids

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Enter value for begin\_snap: 8074

Begin Snapshot Id specified: 8074

Enter value for end\_snap: 8075

End Snapshot Id specified: 8075

Specify the Report Name

~~~~~~~~~~~~~~~~~~~~~~~

The default report file name is awrrpt\_1\_8074\_8075.html. To use this name,

press <return> to continue, otherwise enter an alternative.

Enter value for report\_name: awr\_test.html

Using the report name awr\_test.html

Lấy file trên đường dẫn hiện session vừa connect.

## Scheduler

Tạo job, đặt job cho lệnh, procedure bằng sql developer

B1. Tạo scheduler

B2. Gán quyền

GRANT SCHEDULER\_ADMIN TO hr;

B3. Tạo job: với các tùy chọn: chạy ngay, chạy 1lần, nhiều lần, theo lịch…

Phân biệt job thông thường và lightweight job.

BEGIN

DBMS\_SCHEDULER.CREATE\_JOB (

job\_name => 'my\_lightweight\_job2',

program\_name => 'MY\_PROG',

schedule\_name => 'MY\_SCHED',

job\_style => 'LIGHTWEIGHT');

END;

/

Lightweight: Thay vì tạo hàng ngàn job chạy trong 1 giây, thì tạo một job, chạy nhiều công việc, nhưng là các công việc đơn giản, tốn ít resource. Làm như vậy để giảm tải start các job nhỏ.

Được tạo từ 1 job template

**In the example, MY\_PROG is the job template and the schedule is applied from a named schedule.**

Phân biệt Time-Based or Event-Based Schedule

Khi nào thì sử dụng:

Time-Based: dựa vào thời gian để đặt lịch

Event-based: Dựa vào một sự kiện xảy ra. Thường có xảy ra tự động ở oracle Stream.

* Tạo job phức
  + - **INCLUDE:** Adds a list of dates to the calendaring expression results
    - **EXCLUDE:** Removes a list of dates from the calendaring expression results
    - **INTERSECT:** Uses only the dates that are common to two or more schedules

Kích hoạt tính năng gửi mail cảnh báo:

Using Scheduler Email Notification:

1.Specify the address of the SMTP server you will use to send email messages:

DBMS\_SCHEDULER.SET\_SCHEDULER\_ATTRIBUTE

('email\_server','*host[:port]*');

2.Optionally, set a default sender email address:

DBMS\_SCHEDULER.SET\_SCHEDULER\_ATTRIBUTE

('email\_sender','*valid email address*');

3.Add email notifications for a specified job.

DBMS\_SCHEDULER.ADD\_JOB\_EMAIL\_NOTIFICATION (

job\_name IN VARCHAR2,

recipients IN VARCHAR2,

sender IN VARCHAR2 DEFAULT NULL,

subject IN VARCHAR2

DEFAULT dbms\_scheduler.default\_notification\_subject,

body IN VARCHAR2

DEFAULT dbms\_scheduler.default\_notification\_body,

events IN VARCHAR2

DEFAULT 'JOB\_FAILED,JOB\_BROKEN,JOB\_SCH\_LIM\_REACHED,

JOB\_CHAIN\_STALLED,JOB\_OVER\_MAX\_DUR',

filter\_condition IN VARCHAR2 DEFAULT NULL);

Remove:

DBMS\_SCHEDULER.REMOVE\_JOB\_EMAIL\_NOTIFICATION (

job\_name IN VARCHAR2,

recipients IN VARCHAR2 DEFAULT NULL,

events IN VARCHAR2 DEFAULT NULL);

* Job trong hệ điều hành:

#Set biến

#Set biến môi trường

rman target / nocatalog cmdfile /home/oracle/script\_bk/orcl/backup\_level0.rman log /home/oracle/script\_bk/orcl/log\_backup/$logfile

Exit

* Linux:
  + Viết script rman

(NOTE: Cấu hình autobackup control file và cấu hình retention policy)

run {

ALLOCATE CHANNEL RMAN\_DISK01 TYPE DISK;

ALLOCATE CHANNEL RMAN\_DISK02 TYPE DISK;

ALLOCATE CHANNEL RMAN\_DISK03 TYPE DISK;

ALLOCATE CHANNEL RMAN\_DISK04 TYPE DISK;

BACKUP AS COMPRESSED BACKUPSET ARCHIVELOG ALL FORMAT '/opt/oracle/backup/orcl/arcbk/arc0\_%T\_%d\_%u\_%s\_%U' FILESPERSET 4 DELETE INPUT TAG ARCH;

BACKUP BLOCKS ALL AS COMPRESSED BACKUPSET INCREMENTAL LEVEL 0 DATABASE FORMAT '/opt/oracle/backup/orcl/dbbk/db0\_%T\_%d\_%u\_%s' FILESPERSET 4 TAG FULLBKP;

BACKUP AS COMPRESSED BACKUPSET CURRENT CONTROLFILE FORMAT '/opt/oracle/backup/orcl/bkcontrolfile0\_%T\_%d\_%u\_%s' TAG CTLFILE;

CROSSCHECK BACKUP;

DELETE NOPROMPT OBSOLETE;

DELETE NOPROMPT EXPIRED BACKUP;

RELEASE CHANNEL RMAN\_DISK01;

RELEASE CHANNEL RMAN\_DISK02;

RELEASE CHANNEL RMAN\_DISK03;

RELEASE CHANNEL RMAN\_DISK04;

}

EXIT;

* + Script sh

#!/bin/bash

logfile=`date +%Y%m%d`\_level0.log

export ORACLE\_SID=orcl

export NLS\_DATE\_FORMAT="yyyy-mm-dd hh24:mi:ss"

export ORACLE\_BASE=/opt/oracle

export ORACLE\_HOME=/opt/oracle/112

export PATH=$ORACLE\_HOME/bin:$PATH

rman target / nocatalog cmdfile /home/oracle/script\_bk/orcl/backup\_level0.rman log /home/oracle/script\_bk/orcl/log\_backup/$logfile

exit

* + Đặt crontab

#crontab –e

00 01 \* \* 6,3 /home/oracle/script\_bk/mmoney/backup\_level0.sh

00 01 \* \* 1,2,4,5,0 /home/oracle/script\_bk/mmoney/backup\_level.sh

\* \* \* \* \* command to be executed

- - - - -

| | | | |

| | | | +----- day of week (0 - 6) (Sunday=0)

| | | +------- month (1 - 12)

| | +--------- day of month (1 - 31)

| +----------- hour (0 - 23)(

+------------- min (0 - 59) ( phút )

Crontab -l

* Window
  + Viết script rman tương tự linux
  + Script bat

logfile=`date +%Y%m%d`\_level0.log

set ORACLE\_SID=

set ORACLE\_HOME=

set PATH=%ORACLE\_HOME%\bin:%PATH%

rman target / nocatalog cmdfile C:\backup\_level0.rman log C:\%logfile%

exit

Log file

<http://stackoverflow.com/questions/1192476/windows-batch-script-format-date-and-time>

<http://stackoverflow.com/questions/11083366/format-file-date-yyyymmdd-in-batch>

It's not portable between machines with different date formats but the simplest way is to use a substring:%var:~STARTPOS,LENGTH%

set filedatetime=14/06/2012 12:26

set filedatetime=%filedatetime:~6,4%%filedatetime:~3,2%%filedatetime:~0,2%

echo "%filedatetime%"

"20120614"

Set timedate = %date

C:\Users\chienxinh>set filename=%date:~10,4%%date:~4,2%%date:~7,2%%time:~0,2%%time:~3,2%.log

C:\Users\chienxinh>echo %filename%

201312212258.log

## Manage space

* Shrinking segment space is a nonresumable operation
* Đặt thresholds.
* Các segment
* Tạo bảng chưa tạo segment

SQL> SHOW PARAMETERS deferred\_segment\_creation

NAME TYPE VALUE

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

deferred\_segment\_creation boolean TRUE

SQL> CREATE TABLE seg\_test(c number, d varchar2(500));

Table created.

SQL> SELECT segment\_name FROM user\_segments;

no rows selected

Inserting rows and creating segments:

SQL> INSERT INTO seg\_test VALUES(1, 'aaaaaaa');

1 row created.

SQL> SELECT segment\_name FROM user\_segments;

SEGMENT\_NAME

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

SEG\_TEST

Tạo bảng tạo luôn segment:

CREATE TABLE SEG\_TAB3(C1 number, C2 number)

SEGMENT CREATION IMMEDIATE TABLESPACE SEG\_TBS;

CREATE TABLE SEG\_TAB4(C1 number, C2 number)

SEGMENT CREATION DEFERRED;

Thông tin segment với index, partition.

Without user intervention:

* + No segments for unusable indexes and index partitions
  + Creating an index without a segment:

CREATE INDEX test\_i1 ON seg\_test(c) UNUSABLE;

* + Removing any allocated space for an index:

ALTER INDEX test\_i UNUSABLE;

* + Creating the segment for an index:

ALTER INDEX test\_i REBUILD;

Select tên của objects, tìm objects:

SELECT segment\_name, partition\_name, segment\_type

FROM user\_segments

WHERE segment\_name like '%DEMO';

Tìm các unused object index

http://adminoracle10g.blogspot.de/2012/06/how-to-find-unused-index-in-dataabse.html

Hoặc select object\_name from user\_indexes where status = ‘UNUSABLE’;

Compress table:

Ít thực hiện với OLTP, với OLTP có nhiều hạn chế khi sử dụng compress

Đặt ngưỡng cho alert(EM)

Shrink table:

(NOTE: các bảng đặt chế độ FDA thì không thể shrink được.

Các bảng trước khi shrink thì phải được enable row movement)

ALTER TABLE employees SHRINK SPACE COMPACT;

Resume session, có một số nguyên nhân gây ra treo session, khi giải quyết đc vấn đề thì sử dụng resume để enable lại:

* Out of space
* Maximum extents reached
* Space quota exceeded

ALTER SESSION ENABLE RESUMABLE;

INSERT INTO sales\_new SELECT \* FROM sh.sales;

ALTER SESSION DISABLE RESUMABLE;

ALTER SESSION ENABLE RESUMABLE TIMEOUT 3600

NAME 'multitab insert';

SELECT name, sql\_text FROM user\_resumable;

Những lệnh có thể resumable

The following operations are resumable:

Queries: SELECT statements that run out of temporary space (for sort areas)

DML: INSERT, UPDATE, and DELETE statements

The following DDL statements:

CREATE TABLE ... AS SELECT

CREATE INDEX

ALTER INDEX ... REBUILD

ALTER TABLE ... MOVE PARTITION

ALTER TABLE ... SPLIT PARTITION

ALTER INDEX ... REBUILD PARTITION

ALTER INDEX ... SPLIT PARTITION

CREATE MATERIALIZED VIEW

* Manage space for database

Xác định endian format

SELECT tp.endian\_format

FROM v$transportable\_platform tp, v$database d

WHERE tp.platform\_name = d.platform\_name;

Convert:

CONNECT TARGET SYS@orcl

RMAN>

SQL 'ALTER TABLESPACE hr READ ONLY';

CONVERT TABLESPACE hr

TO PLATFORM 'Solaris[tm] OE (64-bit)'

FORMAT '/tmp/transport\_to\_solaris/%U';;

Using EM to transport.

With RMAN: <http://www.dba-oracle.com/t_rman_88_transport_tablespace.htm>

<http://luhartma.blogspot.com/2006/04/transportable-tablespaces-from-backup.html>

<http://dbaharrison.blogspot.com/2012/08/transportable-tablespace-with-rman-no.html>