59. RAC 환경 튜닝 팁 3 - RAC 환경에서는 single instance보다 buffer cache를 더 크게 설정 해야 한다.

```
실습.
1. 1번 노드와 2번 노드에 현재 buffer cache의 크기를 확인하시오.
(sql 1,2 sys)
ed sga.sql
---------------------------------------------------------
PROMPT *** CURRENT parameter settings ***
col name format a12
col VALUE format a8
SHOW parameter sga_
PROMPT
PROMPT *** SGA Dynamic Component SIZE Information***
col component format a22
col current_size format a15
col min_size format a15

SELECT component,current_size/1048576||'M' current_size,
       min_size/1048576||'M' min_size
FROM v$sga_dynamic_components
WHERE component IN ('shared pool','large pool',
                    'java pool','DEFAULT buffer cache');

col name format a20
col VALUE format a20
PROMPT *** CURRENT parameter settings IN V$PARAMETER ***

SELECT name, VALUE, isdefault
FROM v$parameter
WHERE name IN ('shared_pool_size','large_pool_size',
               'java_pool_size', 'db_cache_size');
---------------------------------------------------------
@sga
```

```
racdb1(SYS) >  @sga
*** CURRENT parameter settings ***

NAME                              TYPE
--------------------------------- -------------------
VALUE
---------------------------------
sga_max_size                      big integer
1584M
sga_target                        big integer
0

*** SGA Dynamic Component SIZE Information***

COMPONENT              CURRENT_SIZE      MIN_SIZE
---------------------- ------------      --------------
shared pool            304M              288M
large pool             32M               32M
java pool              16M               16M
DEFAULT buffer cache   656M              560M

*** CURRENT parameter settings IN V$PARAMETER ***

NAME              VALUE                 ISDEFAULT
----------------- --------------------- -----------
shared_pool_size  0                     TRUE
large_pool_size   0                     TRUE
java_pool_size    0                     TRUE
db_cache_size     0                     TRUE
```

```
racdb2(SYS) > @sga
*** CURRENT parameter settings ***

NAME                              TYPE
--------------------------------- -------------------
VALUE
---------------------------------
sga_max_size                      big integer
1584M
sga_target                        big integer
0

*** SGA Dynamic Component SIZE Information***

COMPONENT              CURRENT_SIZE      MIN_SIZE
---------------------- ------------      --------------
shared pool            288M              272M
large pool             32M               32M
java pool              16M               16M
DEFAULT buffer cache   592M              480M

*** CURRENT parameter settings IN V$PARAMETER ***

NAME              VALUE                 ISDEFAULT
----------------- --------------------- -----------
shared_pool_size  0                     TRUE
large_pool_size   0                     TRUE
java_pool_size    0                     TRUE
db_cache_size     0                     TRUE
```

2. 1번 인스턴스의 db buffer cache 사이즈를 700m로 늘리시오.
(sql 1)
alter system set db_cache_size=700m scope=spfile sid='*';
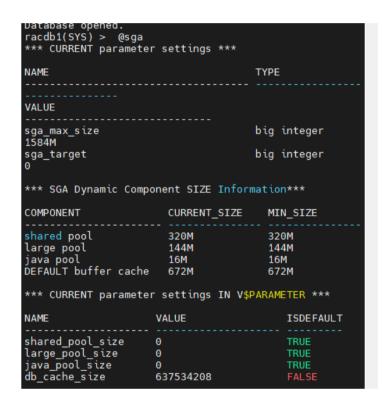
shutdown immediate
startup

@sga

```
racdb1(SYS) > @sga
*** CURRENT parameter settings ***

NAME                                          TYPE
------------------------------------          ------------------------------
VALUE
------------------------------
sga_max_size                                  big integer
1584M
sga_target                                    big integer
0

*** SGA Dynamic Component SIZE Information***

COMPONENT              CURRENT_SIZE     MIN_SIZE
---------------------  ---------------  ---------------
shared pool            304M             224M
large pool             144M             144M
java pool              16M              16M
DEFAULT buffer cache   704M             704M

*** CURRENT parameter settings IN V$PARAMETER ***

NAME                   VALUE                 ISDEFAULT
--------------------   -------------------   ---------
shared_pool_size       0                     TRUE
large_pool_size        0                     TRUE
java_pool_size         0                     TRUE
db_cache_size          738197504             FALSE
```

3. 2번 인스턴스는 내렸다가 올린다.
(sql 2)
shutdown immediate
startup

@sga

```
racdb2(SYS) > @sga
*** CURRENT parameter settings ***

NAME                                          TYPE
------------------------------------          ------------------------------
VALUE
------------------------------
sga_max_size                                  big integer
1584M
sga_target                                    big integer
0

*** SGA Dynamic Component SIZE Information***

COMPONENT              CURRENT_SIZE     MIN_SIZE
---------------------  ---------------  ---------------
shared pool            304M             224M
large pool             144M             144M
java pool              16M              16M
DEFAULT buffer cache   704M             704M

*** CURRENT parameter settings IN V$PARAMETER ***

NAME                   VALUE                 ISDEFAULT
--------------------   -------------------   ---------
shared_pool_size       0                     TRUE
large_pool_size        0                     TRUE
java_pool_size         0                     TRUE
db_cache_size          738197504             FALSE
```

문제 1. 양쪽 노드의 buffer cache size를 600m로 변경하시오.
(sql 1)
alter system set db_cache_size=600m scope=spfile sid='*';

shutdown immediate
startup

@sga

(sql 2)
shutdown immediate
startup

@sga

```
Database opened.
racdb1(SYS) >  @sga
*** CURRENT parameter settings ***

NAME                                      TYPE
----------------------------------------- ----------------
--------------
VALUE
--------------------------------
sga_max_size                              big integer
1584M
sga_target                                big integer
0

*** SGA Dynamic Component SIZE Information***

COMPONENT               CURRENT_SIZE    MIN_SIZE
----------------------- --------------- ----------------
shared pool             320M            320M
large pool              144M            144M
java pool               16M             16M
DEFAULT buffer cache    672M            672M

*** CURRENT parameter settings IN V$PARAMETER ***

NAME                  VALUE                ISDEFAULT
-------------------- -------------------- ---------
shared_pool_size     0                    TRUE
large_pool_size      0                    TRUE
java_pool_size       0                    TRUE
db_cache_size        637534208            FALSE
```

```
Database opened.
racdb2(SYS) > @sga
*** CURRENT parameter settings ***

NAME                                      TYPE
----------------------------------------- ----------------
--------------
VALUE
--------------------------------
sga_max_size                              big integer
1584M
sga_target                                big integer
0

*** SGA Dynamic Component SIZE Information***

COMPONENT               CURRENT_SIZE    MIN_SIZE
----------------------- --------------- ----------------
shared pool             320M            320M
large pool              144M            144M
java pool               16M             16M
DEFAULT buffer cache    672M            672M

*** CURRENT parameter settings IN V$PARAMETER ***

NAME                  VALUE                ISDEFAULT
-------------------- -------------------- ---------
shared_pool_size     0                    TRUE
large_pool_size      0                    TRUE
java_pool_size       0                    TRUE
db_cache_size        637534208            FALSE
```