While working through database log files looking for issues I came across numerous instances of the following error:

```
2019-11-07T03:57:00.623733+02:00
Errors in file
/u01/app/oracle/admin/diag/rdbms/dev/dev1/trace/dev1_ora_8142.trc
(incident=1313939):
ORA-00603: ORACLE server session terminated by fatal error
ORA-27515: inadequate memlock limit or driver settings
Incident details in:
/u01/app/oracle/admin/diag/rdbms/dev/dev1/incident/incdir_1313939/dev1_ora_8
142_i1313939.trc
```

This seems to indicate some sort of memory limit (memlock limit) is being reached by a process in the database. Following the Exacheck recommendation the grid user memlock value was already set to unlimited, and oracle user memlock to 237GB (90% of physical memory). It seemed unlikely this memory lock limit was being reached, but the source of the error was unclear.

This was identified as the query for the failing session from the trc log:

```
----- Current SQL Statement for this session (sql_id=gngtvs38t0060) -----
SELECT /*+ CONNECT_BY_FILTERING */ s.privilege# FROM sys.sysauth$ s
CONNECT BY s.grantee# = PRIOR s.privilege#
                          AND (s.privilege# > 0 OR s.privilege# = -352)
START WITH (s.p
rivilege# > 0 OR s.privilege# = -352) AND s.grantee# IN     (SELECT
c1.privilege# FROM sys.codeauth$ c1 WHERE c1.obj# =
:1)           UNION
SELECT c2.privilege# FROM sys.
codeauth$ c2 WHERE c2.obj# = :2              ORDER BY 1 ASC
```

And the process resource limits show a 64K memlock limit, which makes no sense as it is the Oracle user.

```
----- Process Resource Limits -----
**************** Dumping Resource Limits(s/h) *****************
core file size                     0 KB/UNLIMITED
data seg size              UNLIMITED/UNLIMITED
scheduling priority              0 KB/0 KB
file size                  UNLIMITED/UNLIMITED
pending signals               1005 KB/1005 KB
max locked memory               64 KB/64 KB
max memory size            UNLIMITED/UNLIMITED
open files                       4 KB/4 KB
POSIX message queues           800 KB/800 KB
real-time priority               0 KB/0 KB
stack size                      32 MB/UNLIMITED
cpu time                   UNLIMITED/UNLIMITED
max user processes            1005 KB/1005 KB
virtual memory             UNLIMITED/UNLIMITED
file locks                 UNLIMITED/UNLIMITED
```

```
**************** End of Resource Limits Dump ******************

Process Group: DEFAULT, pseudo proc: 0x4c0aa17f8
O/S info: user: oracle, term: UNKNOWN, ospid: 8142
```

Working back through the Exawatcher Ps archives, I was able to track pid 8142 to its parent process:

```
0 R oracle      8142    8141 17  21   9   10    - 394308 4972401 -
03:56 ?          00:00:03 oracleeiwdev1
(DESCRIPTION=(LOCAL=YES)(ADDRESS=(PROTOCOL=beq)))
0 S oracle      8141    8140  0  10   9   10    - 20888 28639 pipe_wait
03:56 ?          00:00:00
/u01/app/oracle/product/12.2.0.1/dbhome_1/bin/sqlplus -S -L
4 S oracle      8140   90932  0  26   9   10    -  2488 26587 do_wait
03:56 ?          00:00:00 /bin/sh /var/tmp/mgsscript1567727100
4 D root       90932   90927  8   8   9   10    - 40120 38740 lock_page_killabl
03:13 ?          00:04:40 /opt/managesoft/libexec/ndtrack -o
InventoryType=Machine -o UserInteractionLevel=Quiet
0 S root       90927   33457  1   7  19    0    -  6172 29375 hrtimer_nanosleep
03:13 ?          00:00:00 /opt/managesoft/libexec/ndschedag -o
ScheduleType=Machine -r {de9cddcd-53ac-4796-b02c-f00764f00a1f}
1 S root       33457       1  0  22  19    0    -  4096  4546 poll_schedule_tim
Nov06 ?          00:00:00 /opt/managesoft/libexec/ndtask
```

I then looked at the process limits for the ndtask process:

```
[root@db01 Ps.ExaWatcher]# cat /proc/33457/limits
Limit                     Soft Limit           Hard Limit           Units
Max cpu time              unlimited            unlimited            seconds
Max file size             unlimited            unlimited            bytes
Max data size             unlimited            unlimited            bytes
Max stack size            8388608              unlimited            bytes
Max core file size        0                    unlimited            bytes
Max resident set          unlimited            unlimited            bytes
Max processes             1029339              1029339
processes
Max open files            1024                 4096                 files
Max locked memory         65536                65536                bytes
```

At the same time, checking on My Oracle Support I was able to find the exact same issue being experienced and logged as a bug.
https://support.oracle.com/epmos/faces/DocumentDisplay?id=2605233.1&displayIndex=1#CAUSE

With a Solution of: *3rd party softwares connect to database with a hard code memlock setting should have the sufficient value.*

In other words, flexera has a hardcoded memlock-related bug that causes the process to crash every few hours and dump trace logs, which is a problem to maintain.

I therefore have disabled Flexera on all Warehouse database servers.

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