*ORA-15099: disk ‘/dev/oracleasm/disks/ASM1’ is larger than maximum size of 2097152 MBs*

This error happens when your sysadmin makes the LUN on the OS side larger than 2TB, by increasing it, and then you need to “resync” to be aligned with the OS, but if you are using Oracle 12cR1 and newer versions, that is more likely to happen these days, you probably are locked by the wrong parameters inside the ASM instance. Let’s have a look:

SQL> alter diskgroup data resize all;

alter diskgroup data resize all;

\*

ERROR at line 1:

ORA-15032: not all alterations performed

ORA-15099: disk '/dev/oracleasm/disks/ASM1' is larger than maximum size of

2097152 MBs

  As per My Oracle Support note ID 1667736.1, we can clearly see 12cR1 limits are larger than 2 TB per LUN, so I checked on the ASM side and found the Database compatibility was defined wrongly:

SQL> select

name diskgroup

, compatibilty asm\_compat

, database\_compatibility db\_compat

from

v$asm\_diskgroup;

DISKGROUP ASM\_COMPAT DB\_COMPAT

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DATA 12.2.0.1.0 10.1.0.0.0

In this case, the issue was not in the ASM compatibility parameter, but we can see database compatibility inside ASM was defined as 10.1 (10g), this was preventing the usage of 2 TB+ LUNS on ASM. Solve the issue, is pretty simple and straightforward, by adjusting these parameters at the ASM level:

SQL> alter diskgroup data set attribute 'compatible.rdbms' = '12.2.0.1.0';

Diskgroup altered.

Just to confirm the change on the attribute, we can issue this query:

SQL> select

name diskgroup

, compatibilty asm\_compat

, database\_compatibility db\_compat

from

v$asm\_diskgroup;

DISKGROUP ASM\_COMPAT DB\_COMPAT

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DATA 12.2.0.1.0 12.2.0.1.0

So, now we can use a larger LUN size with no issues, so my first command will succeed:

SQL> alter diskgroup data resize all;

Diskgroup altered.