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Memory object size of exceedsgranule size - Increase granule size.

Symptomes

After adding additional physical memory (RAM) and changing CLM to ILM on the Npar, the following boot errors occur when trying to start the Vpar Monitor (vpmon):

```
Press Any Key to interrupt Autoboot
\efi\hpux\AUTO ==> boot vpmon -a
Seconds left till autoboot -   0
AUTOBOOTING...> System Memory = 333 MB
loading section 0
.... (complete)
loading section 1
................................................................................... (complete) loading symbol table loading System Directory (boot.sys) to MFS ......Launching /stand/vpmon
SIZE: Text:1617K + Data:53308K + BSS:10764K = Total:65689K Console is on virtual console - via PCDP

Console is on virtual console - via PCDP Current CLM granule countfor cell 0 is 512.
Memory object size (24636) of exceedsgranule size (128). Rebooting the system. Increase granule size.
```

Causes

The ILM granule size, which is currently set to the default value of 128, is too small to accomidate the additional ILM memory added to the partition. Answer/Solution FIX:The Virtual Partitions Administration Guide Page 185 has additional information on memory granules.

From the error above, the ilm granules size is too small after adding additional memory and converting all CLM (cell local memory) to ILM (interleave memory). Your current ILM and CLM granule sizes are 128, which is the default. There are known performance issues (very long boot times etc...) with having a very small granule size.

Solution

- Config des vPars

```
[root@rnsd511 - /root ] # vparstatus
[Virtual Partition]
                                                        Boot
Virtual Partition Name     State Attributes  Kernel Path        Opts
========================== ===== ============ ====================== =====
rnsd511                    Up    Dyn,Auto,Nsr /stand/vmunix
rnsd512                    Up    Dyn,Auto,Nsr /stand/vmunix
rnsd513                    Up    Dyn,Auto,Nsr /stand/vmunix

[Virtual Partition Resource Summary]
                           CPU    Num  Num   Memory Granularity
Virtual Partition Name     Min/Max CPUs IO     ILM       CLM
========================== ======= ==== ==== ========== ==========
rnsd511                    1/ 16    6    6      128        128
rnsd512                    1/ 16    4    14     128        128
rnsd513                    1/ 16    6    14     128        128

                                    Memory (MB)
                              ILM                  CLM
                           # User              # User
Virtual Partition Name     Ranges/MB    Total MB Ranges/MB    Total MB
========================== ==================== ==================== 
rnsd511                    0/   0          39935   0/   0            0
rnsd512                    0/   0          34816   0/   0            0
rnsd513                    0/   0          55668   0/   0            0
```

⇒ booter en mode "nPar"

```
vparenv -m npars
shutdown -h now
```

```
HPUX> boot
```

⇒ Recréer les vPars en utilisant vparstatus -v pour récup la config.

```
# vparcreate -p rnsd521 -g ilm:1024:y -g clm:1024:y -a cpu::8 -a mem::34816 -a io:1.0.0 -a io:1.0.1 -a io:1.0.2 -a io:1.0.0.2.0.6.0.0.0.0:boot -a io:1.0.0.3.0.6.0.0.0.0.0:altboot
```

```
# vparcreate -p rnsd522 -a cpu::4 -a mem::26622 -a io:1.0.4 -a io:1.0.6 -a 1.0.4.1.0.4.0.79.186.0.0.0.6 -a 1.0.6.1.0.4.0.89.186.0.0.0.6 -a  1.0.4.1.0.4.0.0x50000974080ae1a0.0x4006000000000000 -a 1.0.6.1.0.4.0.0x50000974080ae198.0x4006000000000000 -a
1.0.4.1.0.4.0.0x50000974080ae1dd.0x4009000000000000:boot -a 1.0.4.1.0.4.0.0x50000974080ae1d9.0x4009000000000000:altboot
```

```
# vparcreate -p rnsd523  -a cpu::4 -a mem::28031 -a io:1.0.12 -a io:1.0.14 -a io:1.0.12.1.0.4.0.89.186.0.0.0.0 -a io:1.0.14.1.0.4.0.79.186.0.0.0.0 -a io:1.0.12.1.0.4.0.0x50000974080ae198.0x4000000000000000:altboot -a
io:1.0.14.1.0.4.0.0x50000974080ae1a0.0x4000000000000000 -a io:1.0.14.1.0.4.0.0x50000974080ae1dd.0x4007000000000000:boot
```

```
# vparenv -g ILM:1024 -g CLM:1024
# vparenv -m vpars
# shutdown -h now
```

```
HPUX> boot vpmon
```

Booter une VPAR avec toutes les ressources de la NPAR

- Lister la bootstring

```
lifls /dev/dsk/c1t6d0
ISL          AUTO          HPUX          PAD          LABEL
```

! **important** : ISL / AUTO / HPUX

```
lifcp /dev/rdsk/c2t6d0:AUTO
hpux -lq
```

- Pour modifier la bootstring :

```
mkboot -a "hpux -lq" /dev/rdsk/c1t6d0
```

- On bypasse l'autoboot :

```
vparmodify -p tiths201 -B manual -B nosearch
```

Rajouter de la RAM

```
vparmodify -p <Vpar name> -a mem::16384
```

Supprimer un CPU

```
vparmodify -p <Vpar name> -d cpu::1
```

Ajouter un CPU

```
vparmodify -p <Vpar name> -a cpu::1
```

Passer le nb de CPUs à 4

```
vparmodify -p winona2 -m cpu::4
```