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## Infos générales sur la mémoire

On utilise la commande `kmeminfo`. Attention ces commandes ne sont pas forcément installées sur toute machine HP-UX, il faut installer les **OnlineDiag**.

```
root@machine:/$ /usr/contrib/bin/kmeminfo
tool: kmeminfo 5.15
unix: /stand/vmunix 11.23 64bit IA64
core: /dev/kmem live
link: Thu Sep 07 16:47:42 METDST 2006
boot: Thu Nov 9 16:01:04 2006
time: Thu Nov 9 16:28:21 2006
nbpq: 4096 bytes
```

-----  
Physical memory usage summary (in page/byte/percent):

```
Physical memory      = 1832834    7.0g 100%
Free memory          = 839354    3.2g 46%
User processes       = 441130    1.7g 24%  details with -user
System               = 386278    1.5g 21%
  Kernel             = 215488    841.8m 12%  kernel text and data
  Dynamic Arenas     = 67183    262.4m 4%   details with -arena
    vx_global_pool   = 16144    63.1m 1%
    spinlock         = 11346    44.3m 1%
    vm_pfn2v_arena   = 7236    28.3m 0%
    VFD_BT_NODE      = 3495    13.7m 0%
    M_TEMP           = 3482    13.6m 0%
    Other arenas     = 25480    99.5m 1%  details with -arena
  Super page pool    = 23787    92.9m 1%  details with -kas
  Static Tables      = 91496    357.4m 5%  details with -static
    pfdat            = 42957    167.8m 2%
    vhp              = 16384    64.0m 1%
    nbuf             = 14736    57.6m 1%  bufcache headers
    text             = 6724    26.3m 0%  vmunix text section
    data             = 1534    6.0m 0%  vmunix data section
    Other tables     = 9160    35.8m 0%  details with -static
  Buffer cache       = 170790    667.1m 9%  details with -bufcache
```

## Infos sur la swap

Attention : penser à vérifier si le `swapmem_on` est activé ou non.

```
root@machine:/$ swapinfo -ta
TYPE      Kb      USED      FREE      PCT  START/  Kb
          AVAIL      USED      FREE      USED  LIMIT  RESERVE  PRI  NAME
dev      6283264      0 6283264      0%      0      -      1  /dev/vg00/lvo12
dev      2097152      0 2097152      0%      0      -      1  /dev/vg00/lv_paging
reserve  - 5039336 -5039336
total    8380416 5039336 3341080      60%      -      0      -
```

## Infos sur un segment mémoire

Soit le segment mémoire suivant obtenu avec la commande suivante :

```
machine:/# ipcs -ma|grep sybase|head -n 1
m 110136018 0xdc6412ff --rw----- sybase DBA sybase DBA 1 3309568 4452 4452 1:00:01 no-entry 1:00:01
```

On récupère le pid qu'on donne en paramètre à `shminfo` :

```
machine:/# /usr/contrib/bin/shminfo -s 110136018
libp4 (8.83): Opening /stand/vmunix /dev/kmem
```

```
Loading symbols from /stand/vmunix
Kernel TEXT pages not requested in crashconf
Will use an artificial mapping from a.out TEXT pages
shminfo (3.9)
```

```
Shmid 110136018:
struct shmid_ds at 0xe699d8
Pseudo vas at 0xf33f980
Pseudo pregion at 0xe3d9fe80
Shared region at 0xe50cfc80
Segment at 0x92b400.0xc00000000040f000
Segment allocated out of "Global 64-bit quadrant 4"
Processes using this segment:
proc=0xe468b040 (pid 4452 "AL21_FRA_LIV_M"): vas=0x12702f0c0, SHMEM preg=0xf33c3f00
```

Si shminfo n'est pas installé sur le serveur, il est possible de le récupérer sur <ftp://eh:spear9@hprc.external.hp.com/> (dans les toolset)

Pour plus d'information, consulter la page <http://www.hp-eloquence.com/sdb/html/1144250417.html>

## Paramètres mémoire principaux

On trouve ces infos avec :

- *kmtune* en 11.11 (11iv1)
- *kctune* en 11.23 (11iv2)

```
kmtune|grep -i maxdsiz
maxdsiz      1073741824 - 1073741824
maxdsiz_64bit 4294967296 - 4294967296
shmem        1 - 1
shmmx        4294967296 Y 4294967296
shmmni       1600 - 1600
shmsseg      1024 Y 1024
swapmem_on   1 - 1
maxswapchunks 10000 - 10000
```

Pour modifier les paramètres en 11.11 :

```
kmtune -u -s shmmx=12582912000
```

Pour modifier les paramètres en 11.23 :

```
kctune -h shmmx=12582912000
```

## ipcs amélioré

*ipcs* n'indique que les heures, pas les dates. Voici une version améliorée pour HP-UX :

```
tusc -v ipcs -ma 2>&1 |
awk 'BEGIN { printf("%5s %9s %-20s %3s %19s %19s %19s\n","UID","SIZE","KEY","NAT","ATIME","DTIME","CTIME") }
/pstat/ { id="x" ; key="x" ; at="x" ; dt="x" ; ct="x" ; na="x" }
/psh_uid/ { id=$2 }
/psh_segsz/ { sz=$2 }
/psh_key/ { key=$2 }
/psh_nattch/ { na=$2 }
/psh_atime/ { at=$0 ; sub(".*time: ", "", at) }
/psh_dtime/ { dt=$0 ; sub(".*time: ", "", dt) }
/psh_ctime/ { ct=$0 ; sub(".*time: ", "", ct) }
/psh_valid/ {printf("%5d %9d %-20s %3d %s %s %s\n",id,sz,key,na,at,dt,ct) | "sort" }'
```

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