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Subject: Re: 2GB Memory Limit per process (32bit)?  
Posted by [jacobwm](#) on Fri, 23 Jun 2006 19:52:12 GMT  
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Below is an strace snippet. Looks like the jvm is calling mmap2. The app doesn't even load, the JVM stops cold at startup.

I was looking at the wrong user bean counter... there are no failcnt's when this app doesn't start. I suspect it's because it doesn't actually try to allocate it but checks first to see if it is available?

```
stat64("/usr/java/j2sdk1.4.2_10/jre/lib/jsse.jar", {st_mode=S_IFREG|0644, st_size=902059, ...}) = 0
lstat64("/usr", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre/lib", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre/lib/jsse.jar", {st_mode=S_IFREG|0644, st_size=902059, ...}) = 0
open("/usr/java/j2sdk1.4.2_10/jre/lib/jsse.jar", O_RDONLY|O_LARGEFILE) = 3
fstat64(3, {st_mode=S_IFREG|0644, st_size=902059, ...}) = 0
_llseek(3, 0, [902059], SEEK_END) = 0
mmap2(NULL, 902059, PROT_READ, MAP_SHARED, 3, 0) = 0x4223f000
close(3) = 0
stat64("/usr/java/j2sdk1.4.2_10/jre/lib/jce.jar", {st_mode=S_IFREG|0444, st_size=69736, ...}) = 0
lstat64("/usr", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre/lib", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre/lib/jce.jar", {st_mode=S_IFREG|0444, st_size=69736, ...}) = 0
open("/usr/java/j2sdk1.4.2_10/jre/lib/jce.jar", O_RDONLY|O_LARGEFILE) = 3
fstat64(3, {st_mode=S_IFREG|0444, st_size=69736, ...}) = 0
_llseek(3, 0, [69736], SEEK_END) = 0
mmap2(NULL, 69736, PROT_READ, MAP_SHARED, 3, 0) = 0x4231c000
close(3) = 0
stat64("/usr/java/j2sdk1.4.2_10/jre/lib/charsets.jar", {st_mode=S_IFREG|0644, st_size=5905940, ...}) = 0
lstat64("/usr", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre/lib", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat64("/usr/java/j2sdk1.4.2_10/jre/lib/charsets.jar", {st_mode=S_IFREG|0644, st_size=5905940, ...}) = 0
open("/usr/java/j2sdk1.4.2_10/jre/lib/charsets.jar", O_RDONLY|O_LARGEFILE) = 3
fstat64(3, {st_mode=S_IFREG|0644, st_size=5905940, ...}) = 0
_llseek(3, 0, [5905940], SEEK_END) = 0
```

```
mmap2(NULL, 5905940, PROT_READ, MAP_SHARED, 3, 0) = 0x4232e000
close(3) = 0
stat64("/usr/java/j2sdk1.4.2_10/jre/classes", 0xbfffbe9c) = -1 ENOENT (No such file or directory)
mmap2(NULL, 33554432, PROT_READ|PROT_WRITE|PROT_EXEC,
MAP_PRIVATE|MAP_ANONYMOUS|MAP_NORESERVE, -1, 0) = 0x428d0000
mmap2(0x428d0000, 163840, PROT_READ|PROT_WRITE|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x428d0000
mmap2(NULL, 524288, PROT_READ|PROT_WRITE|PROT_EXEC,
MAP_PRIVATE|MAP_ANONYMOUS|MAP_NORESERVE, -1, 0) = 0x448d0000
mmap2(0x448d0000, 4096, PROT_READ|PROT_WRITE|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x448d0000
mmap2(NULL, 163840, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1,
0) = 0x44950000
gettimeofday({1151092094, 33823}, NULL) = 0
gettimeofday({1151092094, 34036}, NULL) = 0
gettimeofday({1151092094, 34241}, NULL) = 0
gettimeofday({1151092094, 34533}, NULL) = 0
gettimeofday({1151092094, 34692}, NULL) = 0
mmap2(NULL, 2164260864, PROT_READ|PROT_WRITE|PROT_EXEC,
MAP_PRIVATE|MAP_ANONYMOUS|MAP_NORESERVE, -1, 0) = -1 ENOMEM (Cannot allocate
memory)
write(1, "Error occurred during initializa"... , 43Error occurred during initialization of VM
) = 43
write(1, "Could not reserve enough space f"... , 46Could not reserve enough space for object
heap) = 46
write(1, "\n", 1
) = 1
unlink("/tmp/hsperfdata_root/16064") = 0
exit_group(1) = ?
Process 16064 detached
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