
Subject: High Virtual Memory Usage when loading shared libraries

Posted by [alamar](#) on Sat, 12 Dec 2009 22:07:28 GMT

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Kernel:

Quote:Linux version 2.6.24 (root@gw) (gcc version 4.3.2 (Debian 4.3.2-1.1)) #4 SMP Thu Feb 19 04:36:29 CET 2009

Architecture: x86_64

(The program where I noticed this is inspire ircd (it uses lots of dynamically loaded modules) but I have the same issues with other programs that load lots of .so's as well. Also on a non-ovz system I don't see the problem described below)

Hi everybody,

I noticed a process using 300mb virtual memory looking at top in a container a while ago. After doing a "pmap -x pid" it became apparent where the massive usage comes from. The question/problem is that I can't understand why the size pmap shows is so big.

top:

Quote:28665 inspircd 20 0 314m 11m 8352 S 0 1.2 0:00.32 inspircd

314m of virtual memory is way to much on non-ovz systems usage is about ~12m

small extract of pmap -x 28665

Quote:[..]

```
00002b23d397a000    44    -    -    - r-x-- m_tline.so
00002b23d3985000   2044    -    -    - ----- m_tline.so
00002b23d3b84000     4    -    -    - rw--- m_tline.so
00002b23d3b85000    40    -    -    - r-x-- m_userip.so
00002b23d3b8f000   2044    -    -    - ----- m_userip.so
00002b23d3d8e000     4    -    -    - rw--- m_userip.so
```

[..]

```
-----
total kB      321652    -    -    -
```

Now if I look for example at m_userip.so. On the harddisk the .so uses

Quote:64K ./inspircd/modules/m_userip.so

```
00002b23d3b8f000   2044    -    -    - ----- m_userip.so
```

Where do the 2044k come from? And why are there no permissions?

This is the case with every .so file, and they don't dynamically (by using new/malloc) allocate this much memory.

About 300m of the 314m come from the 2044 or 2048 kb entries.

On non-ovz systems the line without the permissions is missing, I can't find any document explaining where this line would come from.

I thought maybe the 2044kb are the Virtual Page size but Virtual Page Size of the System is:

Quote: `getconf PAGESIZE`

4096

Greetings,

Julian

PS:

Sorry, in the meantime I noticed that it's more an architecture related problem and not due to openvz. If anybody knows why this happens on 64bit systems I'd still be glad to learn about it
