

# Before performance tuning

## Memory

```
titan:~# free
              total        used        free      shared    buffers     cached
Mem:          903920      884360      19560         0         6728      167636
-/+ buffers/cache: 709996      193924
Swap:         995988      367732      628256
```

Koristi relativno mnogo swap-a, dmesg ima poruke o OOM-u, dakle treba mu viÅ¡je swap-a (ideja: smanjiti broj apache childova, jer je apache-ssl zapravo jako velik).

MaÅ¡ina zapravo brutalno swap-a, pa nije ni Å udo da se vuÅ e kao crknuta krava:

```
titan:~# vmstat 3
procs  -----memory-----  ---swap--  -----io-----  -system--  -----cpu-----
 r  b  swpd  free  buff  cache  si  so  bi  bo  in  cs  us  sy  id  wa
 6 37 430500 7692 3728 105088 8 2 14 3 2 11 18 12 69 0
 3 45 432800 6512 3632 103128 2524 1596 4019 1931 1370 1613 11 28 61 0
 2 47 442860 7460 3608 102216 649 2553 857 2664 489 381 3 32 65 0
 5 56 444028 4760 3620 102328 497 1840 556 1869 464 282 3 37 60 0
16 44 472132 6788 3684 102392 4467 10889 5239 11409 3297 2770 5 34 61 0
11 36 474232 5868 3784 103212 1589 1212 2047 1435 681 812 13 28 59 0
 3 38 488996 5232 3708 102672 1952 5435 2985 5885 1704 1675 7 30 63 0
 1 18 493556 6976 3808 104396 491 855 1291 1105 866 643 8 31 61 0
 0 24 497508 6024 3736 104160 203 1576 1008 1768 551 592 6 36 59 0
 2 20 499324 5900 3800 105964 509 375 1549 533 517 727 8 30 62 0
 6 23 501608 5928 3844 106700 300 1528 804 1647 505 466 5 35 60 0
 2 26 500752 7804 3872 106388 629 583 1281 795 508 588 6 29 64 0
 4 26 500240 8068 3872 107264 533 300 1311 439 465 580 9 28 63 0
```

Disk nema ukljuÅ en dma:

```
titan:~# hdparm /dev/hda

/dev/hda:
multcount      = 16 (on)
IO_support     = 0 (default 16-bit)
unmaskirq     = 0 (off)
using_dma     = 0 (off)
keepsettings  = 0 (off)
readonly      = 0 (off)
readahead     = 8 (on)
geometry      = 9729/255/63, sectors = 156299375, start = 0

titan:~# hdparm -d 1 -c 3 -a 16 -m 16 /dev/hda
```

Instalirao sam: atop, hdparm, vim, sysstat, atsar

Vratio sam direktive za broj apache child-ova:

```
titan:~# diff -urw /etc/apache-ssl/httpd.conf.before_dpavlin /etc/apache-ssl/httpd.conf
```

```

--- /etc/apache-ssl/httpd.conf.before_dpavlin 2007-02-07 19:29:54.000000000 +0100
+++ /etc/apache-ssl/httpd.conf 2007-02-07 20:19:55.000000000 +0100
@@ -124,7 +124,7 @@
 # KeepAliveTimeout: Number of seconds to wait for the next request from the
 # same client on the same connection.
 #
-KeepAliveTimeout 15
+KeepAliveTimeout 5

#
# Server-pool size regulation. Rather than making you guess how many
@@ -139,10 +139,15 @@
 # a new spare. If there are more than MaxSpareServers, some of the
 # spares die off. The default values are probably OK for most sites.
 #
+MinSpareServers 10
+MaxSpareServers 10
+
#
# Number of servers to start initially --- should be a reasonable ballpark
# figure.
#
+StartServers 10
+
#
# Limit on total number of servers running, i.e., limit on the number
# of clients who can simultaneously connect --- if this limit is ever
@@ -150,6 +155,8 @@
 # It is intended mainly as a brake to keep a runaway server from taking
 # the system with it as it spirals down...
 #
+MaxClients 512
+#MaxClients 2048

#
# MaxRequestsPerChild: the number of requests each child process is

```

Brojevi su namjerno konzervativno mali, cilj je prestati koristiti swap.

Pokušao sam smanjiti broj konekacija iz php-a na mysql:

```

titan:~# diff -urw /etc/php4/apache/php.ini.before_dpavlin /etc/php4/apache/php.ini

*** /etc/php4/apache/php.ini.before_dpavlin 2007-01-31 22:19:05.000000000 +0100
*** /etc/php4/apache/php.ini 2007-02-07 19:45:40.000000000 +0100

@@ -530,7 +530,7 @@
mysql.max_persistent = 16

; Maximum number of links (persistent + non-persistent). -1 means no limit.
-mysql.max_links = 256
+mysql.max_links = 32
mysql.connect_timeout = 30

; Default port number for mysql_connect(). If unset, mysql_connect() will use

```

sve u svemu, donekle uspješno:

```

titan:~# ps ax | egrep '(apache-ssl|mysqld)' | awk '{ print $5 }' | sort | uniq -c
      2 /bin/sh

```

```

1 /usr/lib/apache-ssl/gcache
62 /usr/sbin/apache-ssl
47 /usr/sbin/mysqld
1 grep
1 logger
titan:~# free
              total          used          free      shared    buffers     cached
Mem:           903920       815964       87956         0        21896     304012
-/+ buffers/cache: 490056     413864
Swap:          995988       164696       831292
titan:~# uptime
 20:33:43 up 9 days, 12:38,  4 users,  load average: 1.25, 1.34, 2.60
titan:~# vmstat 3
procs -----memory----- ---swap-- -----io----- -system-- -----cpu-----
 r  b   swpd   free   buff  cache   si   so    bi   bo    in   cs  us  sy  id  wa
 0  0  162956  61912  26160 359660    8    3    16    4    3   13  18  12  69  0
 0  0  162956  55044  26200 359736    1    0    17   232  285  662  24   1  75  0
 6  0  162956  54020  26264 359960    0    0    71   231  337  506  18   1  80  0
 1  0  162956  54984  26300 360856    0    0   292   215  425  615  39   2  60  0
 1  0  162956  51108  26368 360896    0    0    7   335  320  702  32   3  65  0
 1  0  162956  49692  26472 360928    7    0    7   479  439  765  26   2  72  0
 4  0  162956  55144  26496 360960    0    0    3   205  331  655  74   4  22  0
 2  0  162956  54324  26568 360996    0    0    4   489  466  816  56   5  39  0
 0  0  162956  54208  26604 361168    0    0   55   215  310  566  29   2  69  0
 4  0  162956  48900  26840 362348    0    0   373  1059  522  1106  44   4  52  0
 1  0  162956  40216  27000 363224    0    0   277   732  505  967  37   4  59  0
 0  0  162956  55336  27016 363864    0    0   211   220  320  553  47   2  51  0
 1  0  162952  60284  27096 364056    1    0    55   417  355  693  32   2  65  0

```

uptime oko je 2 (Åto je za dvoprosesorsku maÅjnu o.k.), a zapravo ima i neÅto idle CPU-a Åto je uvijek zgodno.