

# 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.

PokuÅ¡ao 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 dvoprosorsku maÅjnu o.k.), a zapravo ima i neÅto idle CPU-a Åto je uvijek zgodno.