Subject: OpenVZ problem or not ?
Posted by n00b_admin on Mon, 16 Oct 2006 07:58:57 GMT

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Hi there,

This morning i detected a serious problem with the apache server on multiple vps's and i don't know exactly were is the problem.

Before i used OpenVZ to make a vps based webhosting environment i was using shared hosting and this problem didn't occur.

On several vps's the apache process died without any resource beind exausted. The apache error_log says:

```
[Mon Oct 16 00:39:27 2006] [warn] child process 17451 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:27 2006] [warn] child process 17452 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:27 2006] [warn] child process 17453 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:27 2006] [warn] child process 17454 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:27 2006] [warn] child process 17455 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:27 2006] [warn] child process 17471 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:27 2006] [warn] child process 17472 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:27 2006] [warn] child process 17473 still did not exit, sending a SIGTERM
*** glibc detected *** /usr/sbin/httpd: double free or corruption (out): 0x403a7158 ***
*** glibc detected *** /usr/sbin/httpd: double free or corruption (out): 0x403a7158 ***
*** glibc detected *** /usr/sbin/httpd: double free or corruption (out): 0x403a7158 ***
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*** glibc detected *** /usr/sbin/httpd: double free or corruption (out): 0x403a7158 ***
*** glibc detected *** /usr/sbin/httpd: double free or corruption (out): 0x403a7158 ***
[Mon Oct 16 00:39:29 2006] [warn] child process 17451 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:30 2006] [warn] child process 17452 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:30 2006] [warn] child process 17453 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:30 2006] [warn] child process 17454 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:30 2006] [warn] child process 17455 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:30 2006] [warn] child process 17471 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:30 2006] [warn] child process 17472 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:30 2006] [warn] child process 17473 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17451 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17452 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17453 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17454 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17455 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17471 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17472 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:31 2006] [warn] child process 17473 still did not exit, sending a SIGTERM
[Mon Oct 16 00:39:33 2006] [error] child process 17451 still did not exit, sending a SIGKILL
```

[Mon Oct 16 00:39:33 2006] [error] child process 17452 still did not exit, sending a SIGKILL
[Mon Oct 16 00:39:33 2006] [error] child process 17453 still did not exit, sending a SIGKILL
[Mon Oct 16 00:39:33 2006] [error] child process 17454 still did not exit, sending a SIGKILL
[Mon Oct 16 00:39:33 2006] [error] child process 17455 still did not exit, sending a SIGKILL
[Mon Oct 16 00:39:33 2006] [error] child process 17471 still did not exit, sending a SIGKILL
[Mon Oct 16 00:39:33 2006] [error] child process 17472 still did not exit, sending a SIGKILL
[Mon Oct 16 00:39:33 2006] [error] child process 17473 still did not exit, sending a SIGKILL
[Mon Oct 16 00:39:34 2006] [notice] SIGHUP received. Attempting to restart

I've checked the user_beancounters file and i don't have any failcnt's.

The site hosted is a simple one, html based, no php or other dinamic page generating language.

After some googleing i only found answers about this problem related to a php extension but not anything else

Maybe someone here has stumbled on this one before me and could give me some hints

EDIT:

After some checking i discovered that ALL apache servers are dead since 8:36 this morning !

They all ended operations with the following message:

[Mon Oct 16 08:36:59 2006] [notice] caught SIGTERM, shutting down

And i didn't shut them all down, the vps's were all up but the apache servers all down and all the logs have the messages posted above in them

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Subject: Re: OpenVZ problem or not ?
Posted by Valmont on Mon, 16 Oct 2006 08:32:19 GMT
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Please, check resources /proc/user_beancounters, then errors will begin.

*** glibc detected *** /usr/sbin/httpd: double free or corruption (out): 0x403a7158 ***

Looks like error in httpd, or maybe in one of dynamic lib's.

Subject: Re: OpenVZ problem or not ?
Posted by n00b_admin on Mon, 16 Oct 2006 10:07:51 GMT

Well, i've sead that user_beancounters doesn't report any problems.

The thing that puzzles me is that all apache servers on all vps's died more or less at the same time.

The only thing common to all is that all of them are using the same template (fedora core 5) and the same modules loaded. If some module is causing trouble it's the same problem in all of them.

The only module added by me that is not standard in apache is mod_security. But that one didn't cause problems in the past.

Subject: Re: OpenVZ problem or not ?
Posted by Valmont on Mon, 16 Oct 2006 10:22:44 GMT

Maybe version of apache, or mod_security has been changed (updated?)

I think, you should report developers of mod_sec about it. Or before that check apache+mod_sec on HN (ve0).

Subject: Re: OpenVZ problem or not ?
Posted by n00b_admin on Mon, 16 Oct 2006 12:21:15 GMT

I considered writing on theyr mailing list but the fact that happened on all the vps's got me wondering if this is not an openvz bug.

Apache is up to date version 2.2.2 (i know the latest is 2.2.3)

Mod_security is version 1.9.4 today they released version 2 and i'll wait for the rpm's to show up in fedora-extras.

I can't test the setup on my HN because i use centos on it

Subject: Re: OpenVZ problem or not ?
Posted by Valmont on Mon, 16 Oct 2006 12:31:18 GMT

Then try to use strace (something like strace -o log -f -p pid's) to check problem...

Subject: Re: OpenVZ problem or not ?
Posted by dev on Tue, 17 Oct 2006 11:34:58 GMT
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glibc messages warn you about corrupted memory heap.
This can be due to numerous reasons:
1. application writes beyond the allocated memory ranges and thus corrupts some glibc data.
All the apaches theoretically can crash if you use the same version of httpd and mod_'s. You can
try to debug it via running apache under njamd or similar memory debugger. It will point you the
broken code.

2. It can be hardware memory corruption.
Check dmesg and /var/log/message output on suspicous messages like this:

MCE: The hardware reports a non fatal, correctable incident occurred on CPU 0.
Bank 2: 940040000000017a

See more details here:
http://wiki.openvz.org/Machine_check_exception
http://wiki.openvz.org/Hardware_testing

Subject: Re: OpenVZ problem or not ?
Posted by n00b_admin on Thu, 19 Oct 2006 07:54:59 GMT
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Thanks for your answers !

I will update mod_security as soon as i get the new version.

I've checked /var/log/messages and /var/log/dmesg but i didn't find any problems or hardware
error messages.

The weird thing is it didn't happened again from my first post.

Subject: Re: *CLOSED* OpenVZ problem or not ?
Posted by dagr on Sun, 26 Nov 2006 16:32:53 GMT
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Had the same error with apache. Found out later that in httpd.conf php4 and php5 modules were
loaded simultaneously (left from old php compile). Beware -)

Subject: Re: OpenVZ problem or not ?

Posted by n00b_admin on Tue, 28 Nov 2006 11:50:54 GMT
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Well it seems it may be an openvz issue after all.

It's been a while now and the crash didn't ocuur again but a weird thing happened.

I had an apache server installed on the HN to try a vps management php script but i dropped the idea at that time. The server was still running and it was set to start with the HN. After some work i've done on the HN that involved restarting the machine i noticed the webserver started on the HN an stopped it.

At first i didn't noticed but the phones started ringing. All apache servers in the vps's were stopped !

I stumbled on this same issue with a qmail server left on the HN that interfered with another one installed in a vps.

As a rule of thumb it is best NOT to run any services on the HN that may be running in a vps !

Subject: Re: OpenVZ problem or not ?
Posted by dev on Tue, 28 Nov 2006 12:01:30 GMT
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maybe its scripts run something like:
killall httpd
from VE0?
sure, this command kills all the users.

just don't run anything in VE0 except for ssh.
This is a very simple rule of secure system regarding to any virtualization system.

Subject: Re: OpenVZ problem or not ?
Posted by rickb on Tue, 28 Nov 2006 23:53:25 GMT
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Running any services on the HN is ill advised. The redhat init scripts aren't expecting many processes to be running, even though they are under VE context, HN can still see them in its /proc. So, if the initscript kills them in a lazy way, (killall), your VEs will suffer.

However, the problem exists for applications which are not "services"-apache, mysql, etc. For example, take crond in redhat/centos:

[root@gallium ~]# /etc/init.d/crond status
crond (pid 17077 8226 16661 22837 603 6829 19314 27367 14965 29437 9188 13289 9025 6810

6413 2284 18725 12985 4776 29353 24821 16585 6167 2093 28784 26881 8950 4117 15282 2945 2389 28970 25190 12507 9026) is running...
[root@gallium ~]#

Those are the cronds of VEs. Stopping cron from /etc/init.d/cron:

```
stop() {
    echo -n $"Stopping $prog: "
    if [ ! -e /var/lock/subsys/crond ]; then
        echo -n $"cannot stop crond: crond is not running."
        failure $"cannot stop crond: crond is not running."
        echo
        return 1;
    fi
    killproc crond
    RETVAL=$?
    echo
    [ $RETVAL -eq 0 ] && rm -f /var/lock/subsys/crond;
    return $RETVAL
}
```

killproc:

```
    pid=
    if [ -f /var/run/${base}.pid ]; then
            local line p
            read line < /var/run/${base}.pid
            for p in $line ; do
                    [ -z "${p//[0-9]/}" -a -d "/proc/$p" ] && pid="$pid $p"
            done
    fi
    if [ -z "$pid" ]; then
            pid=`pidof -o $$ -o $PPID -o %PPID -x $1 || \
                    pidof -o $$ -o $PPID -o %PPID -x $base`
    fi
```

So, if the pid file exists, there shouldn't be a problem. But, if that first [if] can't find the pid file, theres gonna be trouble for all of your VE cronds.

[root@gallium ~]# pidof crond
17077 8226 16661 22837 603 6829 19314 27367 14965 29437 9188 13289 9025 6810 6413 2284 18725 12985 4776 29353 24821 16585 6167 2093 28784 26881 8950 4117 15282 2945 2389 28970 25190 12507 9026
[root@gallium ~]# vzpid 17077
Pid   VPSID   Name
17077   9889165 crond
[root@gallium ~]# vzpid 8226

```
Pid    VPSID  Name
8226   9889429 crond
```

This is probably the reason all of your httpd's got killed. Hope this helps.

Rick Blundell