Subject: Is there a stable OpenVZ kernel, and which should be fit for production
Posted by Dariush Pietrzak on Tue, 22 Nov 2011 08:52:18 GMT
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Hello,
 since 2.6.32 branch is no longer maintained:
"
Also, from now (30 August 2011) we no longer maintain the following kernel branches:

* 2.6.27
* 2.6.32
"
 we have switched to RHEL6 branch, which seems to run fine, and solves some
long-running problems with 2.6.32 (vSwap, problem with accounting of
mmaped files usage).
 All was nice until some heavier loaded servers came online with RHEL6, and
- they started crashing. And then came the upgrade train:
stab036.1 => stab037.1 => stab039.10 => stab040.1 => stab042.1 etc

 With one of the problems we caught, we were told to switch from stable to
testing kernels (now I see that that testing kernel later became stable,
so while confusing, it makes some sense).
 All those kernels (and stab039.11, which from description should be
latest stable) exhibit the same problem/class of problems - when put under
stress, they crash.
 It's quite easy to recreate, now that we've spent some time tracking it down,
just start the machine with for example:

 stress --cpu 12 --io 16 --vm 32 -d 24 --hdd-bytes 10G
and maybe bonnie++ running in loop, and in few minutes/few hours you've got
dead machines spewing something like:

[1515.249585] BUG: scheduling while atomic: stress/2054/0xffff8800
[1515.250189] BUG: unable to handle kernel paging request at ffffffc047118e0
[1515.250189] IP: [<ffffffff8105620e>] account_system_time+0x9e/0x1f0
[1515.250189] PGD 1a27067 PUD 0
[1515.250189] Thread overran stack, or stack corrupted
[1515.250189] Oops: 0000 [#1] SMP

or maybe:
[1876.747809] BUG: unable to handle kernel paging request at 00000006000000bd
[1876.747815] IP: [<ffffffff8105a4fe>] select_task_rq_fair+0x32e/0xa20
[1876.747823] PGD 12d089067 PUD 0
[1876.747826] Oops: 0000 [#1] SMP

or
[38764.623677] BUG: unable to handle kernel paging request at 000000000001e440
[38764.623677] IP: [<ffffffff814c8efe>] _spin_lock+0xe/0x30

[38764.623677] PGD 12c7b4067 PUD 12c7b5067 PMD 0
[38764.623677] Oops: 0002 [#2] SMP
[38764.623677] last sysfs file: /sys/devices/virtual/block/ram9/stat
[38764.623677] CPU 1
or sometimes strangely affecting HP smart array, and causing it to
disconnect it's raids (I don't understand how that's possible, but it
doesn't happen with old openvz)

Under the same load, classic 2.6.32-openvz kernels do just fine (although
my personal feeling is that rhel6 is way more snappy under such a load).

It usually takes less then few hours for rhel6 kernel to crash, although
with lighter load it might take weeks or months.

Should we continue testing 'stable' branch, or maybe fixes are more likely
to be expected in testing 042.x?

best regards, Eyck
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