
Subject: Re: Container Test Campaign

Posted by [Kirill Korotaev](#) on Mon, 03 Jul 2006 07:49:45 GMT

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>From what I see just just after 1 minute check of your results:

DBench:

- different disk I/O schedulers are compared. This makes comparison useless (not virtualization technologies are compared itself).
 - the fact that there is too much difference between measurements (e.g. vserver makes linux faster :lol:) makes me believe that you use large disk partiion, where data blocks allocation on the disk influence your results.
- To make these measurements correct the same partition with the size closest to the required max disk space should be used in all DBench tests.

TBench:

- when running inside VE, please, make sure, that /proc/user_beancounters doesn't show you resource allocation fails (failcnt column).
- Resource limits set by default can be just too small to finish your test case.
- And this doesn't mean your conclusion 'Concerning the results, obviously more isolation brings more overhead.'
- I'm really suprised to see such statements.

I also noticed that you do the measurements with different HZ settings.
This influences the results as well...

BTW, do you plan to do functional testing in addition to performance?

Thanks,
Kirill

> Hi,

>

> A first round about virtualisation benchmarks can be found here:

> <http://lxc.sourceforge.net/bench/>

- > These benchmarks run with vanilla kernels and the patched versions of
- > well know virtualisation solutions: VServer and OpenVZ. Some benches also
- > run inside the virtual 'guest' but we ran into trouble trying to run
- > some of them... probably virtual 'guest' configuration issues... we will
- > trying to fix them...
- > The metacluster migration solution (formely a Meiosys company produt)
- > was added as it seems that the checkpoint/restart topic is close to the
- > virtualisation's one (OpenVZ now provides a checkpoint/restart
- > capability).
- > For the moment, benchmarks only ran on xeon platform but we expect more
- > architecture soon. Besides the 'classic' benches used, more network
- > oriented benches will be added. Netpipe between two virtual 'guests' for

> example. We hope we will be able to provide results concerning the
 > virtual 'guest' scalability, running several 'guest' at the same time.
 >
 > Best regards,
 >
 >
 > Le mercredi 07 juin 2006 à 16:20 +0200, Clement Calmels a écrit :
 >
 >>Hello !
 >>
 >>I'm part of a team of IBMers working on lightweight containers and we
 >>are going to start a new test campaign. Candidates are vserver,
 >>vserver context, namespaces (being pushed upstream), openvz, mcr (our
 >>simple container dedicated to migration) and eventually xen.
 >>
 >>We will focus on the performance overhead but we are also interested in
 >>checkpoint/restart and live migration. A last topic would be how well
 >>the
 >>resource managment criteria are met, but that's extra for the moment.
 >>
 >>We plan on measuring performance overhead by comparing the results on
 >>a vanilla kernel with a partial and with a complete virtual
 >>environment. By partial, we mean the patched kernel and a 'namespace'
 >>virtualisation.
 >>
 >>Test tools
 >>-----
 >>o For network performance :
 >>
 >> * netpipe (<http://www.scl.ameslab.gov/netpipe/>)
 >> * netperf (<http://www.netperf.org/netperf/NetperfPage.html>)
 >> * tbench (<http://samba.org/ftp/tridge/dbench/README>)
 >>
 >>o Filesystem :
 >>
 >> * dbench (<http://samba.org/ftp/tridge/dbench/README>)
 >> * iiozone (<http://www.iozone.org/>)
 >>
 >>o General
 >>
 >> * kernbench (<http://ck.kolivas.org/kernbench/>) stress cpu and
 >> filesystem through kernel compilation
 >> * More 'real world' application could be used, feel free to submit
 >> candidates...
 >>
 >>We have experience on C/R and migration so we'll start with our own
 >>scenario, migrating oracle under load. The load is generated by DOTS
 >>(<http://ltp.sourceforge.net/dotshow>) We ran into trouble trying to run sto.php).

>>
>>If you could provided us some material on what has already been done :
>>URL, bench tools, scenarios. We'll try to compile them in. configuration
>>hints and tuning are most welcome if they are reasonable.
>>
>>Results, tools, scenarios will be published on lxc.sf.net . We will
>>set up the testing environment so as to be able to accept new
>>versions, patches, test tools and rerun the all on demand. Results,
>>tools, scenarios will be published on lxc.sf.net.
>>
>>thanks !
>>
>>Clement,
>>
