
Subject: OpenVZ Kernel generally slow?

Posted by [disaster](#) on Thu, 05 Mar 2009 14:13:12 GMT

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Hi!

Is OpenVZ Kernel slow?

When i'm running unixbench-4.1.0-wht-2 on the Host Machine with a non OpenVZ 2.6.27.18 Vanilla Kernel i get the following results:

| INDEX VALUES | | | |
|---------------------------------------|----------|------------|--------|
| TEST | BASLINE | RESULT | INDEX |
| Dhrystone 2 using register variables | 376783.7 | 50530575.6 | 1341.1 |
| Double-Precision Whetstone | 83.1 | 1674.4 | 201.5 |
| Execl Throughput | 188.3 | 25659.0 | 1362.7 |
| File Copy 1024 bufsize 2000 maxblocks | 2672.0 | 615188.0 | 2302.4 |
| File Copy 256 bufsize 500 maxblocks | 1077.0 | 196511.0 | 1824.6 |
| File Read 4096 bufsize 8000 maxblocks | 15382.0 | 1422019.0 | 924.5 |
| Pipe Throughput | 111814.6 | 11214912.1 | 1003.0 |
| Pipe-based Context Switching | 15448.6 | 2299837.1 | 1488.7 |
| Process Creation | 569.3 | 64781.5 | 1137.9 |
| Shell Scripts (8 concurrent) | 44.8 | 4974.5 | 1110.4 |
| System Call Overhead | 114433.5 | 17398060.3 | 1520.4 |
| ===== | | | |
| FINAL SCORE | | 1136.9 | |

When i install OpenVZ 2.6.18 or 2.6.26 Kernel and run WHT i get something like this:

| INDEX VALUES | | | |
|---------------------------------------|----------|------------|--------|
| TEST | BASLINE | RESULT | INDEX |
| Dhrystone 2 using register variables | 376783.7 | 43674178.6 | 1159.1 |
| Double-Precision Whetstone | 83.1 | 1467.1 | 176.5 |
| Execl Throughput | 188.3 | 5866.4 | 311.5 |
| File Copy 1024 bufsize 2000 maxblocks | 2672.0 | 398961.0 | 1493.1 |
| File Copy 256 bufsize 500 maxblocks | 1077.0 | 207161.0 | 1923.5 |
| File Read 4096 bufsize 8000 maxblocks | 15382.0 | 1213218.0 | 788.7 |
| Pipe Throughput | 111814.6 | 10492852.7 | 938.4 |
| Pipe-based Context Switching | 15448.6 | 2225406.2 | 1440.5 |
| Process Creation | 569.3 | 13309.5 | 233.8 |
| Shell Scripts (8 concurrent) | 44.8 | 1571.6 | 350.8 |
| System Call Overhead | 114433.5 | 13993448.6 | 1222.8 |
| ===== | | | |
| FINAL SCORE | | 699.4 | |

Stefan

Subject: Re: OpenVZ Kernel generally slow?
Posted by [maratrus](#) on Fri, 06 Mar 2009 11:14:54 GMT
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Hello,

could you possibly try
OpenVZ 2.6.27 kernel
<http://download.openvz.org/kernel/branches/2.6.27/2.6.27-aiv-azovsky.1/>

and also 2.6.18 pure RHEL5 kernel

Subject: Re: OpenVZ Kernel generally slow?
Posted by [disaster](#) on Fri, 06 Mar 2009 12:28:40 GMT
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Hi!

I cannot test plain RHEL 5 Kernel cause i use Debian instead of Redhat.

Here are the Results from OpenVZ 2.6.27:

| TEST | INDEX VALUES | BASELINE | RESULT | INDEX |
|---------------------------------------|--------------|----------|------------|--------|
| Dhrystone 2 using register variables | | 376783.7 | 44178754.0 | 1172.5 |
| Double-Precision Whetstone | | 83.1 | 1458.9 | 175.6 |
| Execl Throughput | | 188.3 | 4718.0 | 250.6 |
| File Copy 1024 bufsize 2000 maxblocks | | 2672.0 | 569144.0 | 2130.0 |
| File Copy 256 bufsize 500 maxblocks | | 1077.0 | 178028.0 | 1653.0 |
| File Read 4096 bufsize 8000 maxblocks | | 15382.0 | 1172482.0 | 762.2 |
| Pipe Throughput | | 111814.6 | 9205265.5 | 823.3 |
| Pipe-based Context Switching | | 15448.6 | 1949721.8 | 1262.1 |
| Process Creation | | 569.3 | 10826.7 | 190.2 |
| Shell Scripts (8 concurrent) | | 44.8 | 1274.3 | 284.4 |
| System Call Overhead | | 114433.5 | 13813705.2 | 1207.1 |
| | | ===== | | |
| FINAL SCORE | | | 654.2 | |

I'm using the provided default configs (only change processor Type to Intel Xeon).

Subject: Re: OpenVZ Kernel generally slow?
Posted by [maratrus](#) on Fri, 06 Mar 2009 12:33:12 GMT
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Hello,

could you please specify your environment in detail.
As far as I understand this test is running on the HN. Am I right?

Subject: Re: OpenVZ Kernel generally slow?
Posted by [disaster](#) on Fri, 06 Mar 2009 17:17:44 GMT
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You're right - it is running in the HN. It is a plain Debian 4.0. No VPS installed at the moment. Only installed OpenVZ Kernel instead of the vanilla one.

Subject: Re: OpenVZ Kernel generally slow?
Posted by [disaster](#) on Mon, 09 Mar 2009 09:18:53 GMT
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If you need more information - please ask.

Subject: Re: OpenVZ Kernel generally slow?
Posted by [maratrus](#) on Tue, 10 Mar 2009 09:00:43 GMT
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Hello,

could you please check what kind of i/o schedulers are used
when vanilla kernel is booted and when OpenVZ is booted?
It may be obtained via "cat /sys/block/sdb/queue/scheduler".
The same interface can be used while changing that value.

"echo "SOMETHING" > /sys/block/sdb/queue/scheduler".

And some additional information (just in case):
from both kernels

- cat /proc/meminfo
 - cat /proc/mounts
 - tune2fs -l \$DEVICE
-
-

Subject: Re: OpenVZ Kernel generally slow?
Posted by [maratrus](#) on Tue, 10 Mar 2009 09:07:07 GMT
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I've told about i/o schedulers but forgotten to ask you experiment with different schedulers.
Thank you.

Subject: Re: OpenVZ Kernel generally slow?
Posted by [disaster](#) on Tue, 10 Mar 2009 09:49:49 GMT
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Both are CFQ and i've also tried Anticipatory sched no difference. I'll now setup another machine - cause i needed the last one and will post results again with the additional informations you want.

Subject: Re: OpenVZ Kernel generally slow?
Posted by [maratrus](#) on Tue, 10 Mar 2009 10:07:05 GMT
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Hi,

seems my previous suggestions were not quite correct.

Tests that are "failed" on OpenVZ kernel are: "ExecI Throughput" and "Process Creation".
An overhead during the process creation is normal because OpenVZ accounts memory. But the suspicious fact is SUCH big overhead!

Subject: Re: OpenVZ Kernel generally slow?
Posted by [disaster](#) on Tue, 10 Mar 2009 10:16:46 GMT
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Yeah that's right - i was wonderung why you wanted so much information about the filesystem and harddisks I've seen that the process results are really bad and i also know that OpenVZ has a overhead. But so much?? Any idea?

Subject: Re: OpenVZ Kernel generally slow?
Posted by [maratrus](#) on Tue, 10 Mar 2009 10:49:41 GMT
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I cannot investigate this issue closely right now.
I think it's important not to lose your efforts and results.
So, what do you think about filing a bug?
<http://bugzilla.openvz.org/>

Subject: Re: OpenVZ Kernel generally slow?
Posted by [disaster](#) on Tue, 10 Mar 2009 10:59:32 GMT
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i've made a bug report:
http://bugzilla.openvz.org/show_bug.cgi?id=1210
