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:

TEST	INDEX VALUES BASELINE	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:

TEST	INDEX VALUES BASELINE	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:

	INDEX VALUES		
TEST	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: "Execl 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