
Subject: Can OpenVZ use Intel VT-d on Nehalem server?

Posted by [hisaltesse](#) on Fri, 13 Nov 2009 20:53:54 GMT

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I was wondering if there is any additional benefit to openvz when the intel vt-d virtualization technology is turned on?

What about HyperThreading?

We are currently running openvz through proxmox on an intel nehalem 5520 and with only 6 active VMs, each having mysql, we are facing some load average spikes from less than 1 to over 30. And these spikes happen approximately 5 time a day to once an hour. Other than that the load average remains below 1.

We can't find why this happens.

System run on RAID10 with Adaptec controler....

Subject: Re: Can OpenVZ use Intel VT-d on Nehalem server?

Posted by [ramjet](#) on Fri, 13 Nov 2009 21:42:33 GMT

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About your first question I don't think it matters. Only for kvm.

I think HyperThreading will help with general performance including OpenVZ.

I have a lot of different HP servers including a DL180 and a DL380 both with a single 5520. I have several raid controllers like P212 and P410 with and without cache modules.

Can I recreate your tests or are your sw/databases proprietary?

Load average is a difficult figure. Try to look up how it's calculated... But for a 8 core system it okay to have a load of 7.5. The load should just be below the number of total cores. I prefer to use htop(1) which shows each core' load in percent.

Only problem I have with performance is that videostreaming from a container has a glitch once a minute. I have access to a bridgetech probe so when time permits I can hopefully find the cause.

Subject: Re: Can OpenVZ use Intel VT-d on Nehalem server?

Posted by [hisaltesse](#) on Fri, 13 Nov 2009 21:48:28 GMT

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I understand your point about the load. In our case there is something wrong. We run an 8-core system. This is our load history today running the command sar -P (assuming that you have sysstat installed)

sar -P

Linux host 2.6.24-5-pve #1 SMP PREEMPT Tue May 12 09:01:17 CEST 2009 x86_64
11/13/2009

00:00:01	pswch/s	runq	nrproc	lavg1	lavg5	avg15	_procload_
00:10:01	536	4	720	0.16	0.14	0.10	
00:20:01	556	5	722	0.31	0.20	0.12	
00:30:01	653	8	730	0.13	0.23	0.17	
00:40:01	568	9	737	0.18	0.19	0.18	
00:50:01	696	7	737	0.16	0.21	0.18	
01:00:01	693	7	763	0.27	0.27	0.21	
01:10:01	596	6	735	0.30	0.22	0.18	
01:20:01	589	6	738	0.26	0.22	0.18	
01:30:01	628	9	737	0.49	0.23	0.17	
01:40:01	625	5	734	0.44	0.37	0.25	
01:50:01	594	8	747	0.16	0.29	0.29	
02:00:01	595	8	751	0.47	0.37	0.29	
02:10:01	577	9	746	0.13	0.14	0.20	
02:20:01	609	6	743	0.27	0.35	0.31	
02:30:01	588	6	747	0.48	0.48	0.39	
02:40:01	648	7	745	0.25	0.24	0.27	
02:50:01	561	7	739	0.19	0.18	0.23	
03:00:01	479	9	753	0.08	0.09	0.15	
03:10:01	500	5	735	0.08	0.04	0.08	
03:20:01	508	6	741	1.02	0.61	0.29	
03:30:01	486	7	753	0.82	0.71	0.49	
03:40:10	450	14	747	23.41	7.87	3.18	
03:50:01	681	11	725	1.87	3.31	3.21	
04:00:01	535	7	723	2.11	1.63	2.26	
04:10:01	491	6	732	1.65	1.24	1.69	
04:20:01	523	5	738	0.70	1.20	1.49	
04:30:01	367	4	723	0.66	4.68	4.07	
04:40:01	529	6	730	1.08	1.45	2.56	
04:50:01	486	8	731	0.15	0.32	1.42	
05:00:01	481	8	728	0.12	0.12	0.77	
05:10:01	492	4	724	0.08	0.11	0.45	
05:20:01	392	5	737	2.75	11.73	7.22	
05:30:01	470	4	730	0.12	1.68	3.83	
05:40:01	480	5	729	0.07	0.31	2.05	
05:50:01	473	9	743	0.19	0.16	1.13	
06:00:01	492	5	743	0.11	0.09	0.61	
06:10:01	483	8	741	0.07	0.07	0.34	
06:20:01	465	6	747	0.14	0.08	0.20	
06:30:01	489	8	751	0.11	0.09	0.14	
06:40:01	476	6	751	0.06	0.08	0.09	
06:50:01	458	5	725	0.00	0.03	0.06	

07:00:01	482	4	727	0.16	0.09	0.06
07:10:01	474	5	733	0.04	0.07	0.05
07:20:01	475	5	738	0.25	0.13	0.07
07:30:01	462	6	736	0.05	0.06	0.05
07:40:01	479	8	731	0.02	0.06	0.07
07:50:01	473	4	720	0.02	0.03	0.04
08:00:01	460	5	725	0.01	0.03	0.02
08:10:01	488	5	728	0.05	0.14	0.09
08:20:01	473	6	726	0.03	0.05	0.06
08:30:01	470	5	737	0.06	0.04	0.03
08:40:01	484	6	745	0.36	0.17	0.07
08:50:01	467	5	745	0.46	0.18	0.10
09:00:01	472	7	741	0.24	0.20	0.12
09:10:01	484	5	727	0.06	0.10	0.09
09:20:01	545	5	732	0.04	0.10	0.08
09:30:01	541	4	736	0.01	0.10	0.09
09:40:01	468	5	742	0.01	0.04	0.06
09:50:01	466	5	738	0.00	0.02	0.03
10:00:01	467	8	747	0.16	0.17	0.07
10:10:01	490	5	742	0.04	0.06	0.06
10:20:01	498	5	740	0.08	0.05	0.04
10:30:01	907	3	723	0.09	2.72	2.25
10:40:01	501	5	754	0.13	0.42	1.19
10:50:01	536	8	756	0.04	0.19	0.70
11:00:01	1430	8	828	0.10	0.23	0.52
11:10:01	539	8	826	0.07	0.11	0.30
11:20:01	543	6	826	0.03	0.10	0.20
11:30:01	539	10	816	0.07	0.06	0.12
11:40:01	544	7	824	0.13	0.07	0.08
11:50:01	553	11	830	0.12	0.17	0.12
12:00:01	567	7	837	0.03	0.08	0.08
12:10:02	544	9	831	0.01	0.03	0.04
12:20:01	539	3	796	0.05	0.08	0.06
12:30:01	543	5	799	0.15	0.14	0.09
12:40:01	549	4	805	0.01	0.17	0.16
12:50:01	540	7	803	0.09	0.06	0.09
13:00:01	542	5	808	0.05	0.06	0.07
13:10:12	455	24	847	11.70	3.58	1.29
13:20:01	606	4	803	0.13	1.65	1.78
13:30:01	531	5	801	0.00	0.23	0.93
13:40:02	357	6	826	17.22	11.81	5.43
13:50:01	572	4	803	0.06	1.65	2.97
14:00:01	578	5	807	0.12	0.29	1.58
14:10:01	581	8	807	0.12	0.16	0.88
14:20:01	593	6	800	0.12	0.14	0.52
14:30:01	550	7	827	0.02	0.10	0.32
14:40:01	535	4	818	0.08	0.06	0.18
14:50:11	482	16	820	31.29	10.74	3.97

15:00:01	1952	9	833	0.05	5.27	5.94
15:10:01	624	4	801	0.14	0.79	3.15
15:20:01	664	6	802	0.05	0.14	1.66
15:30:01	539	9	807	0.14	0.12	0.90
15:40:01	542	8	816	0.00	0.03	0.47
15:50:01	548	8	823	0.25	0.10	0.28
16:00:01	537	8	837	0.37	0.19	0.21

Subject: Re: Can OpenVZ use Intel VT-d on Nehalem server?

Posted by [ramjet](#) on Fri, 13 Nov 2009 22:21:26 GMT

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It's going to be difficult to help you without further information. You have the load spikes for sure. Who says that is wrong? Maybe 6 mysql databases doing housekeeping at the same time or your raid controller doing some syncing. Who or what are accessing the databases?. How does the load compare to the load of a non openvz installation?

Subject: Re: Can OpenVZ use Intel VT-d on Nehalem server?

Posted by [hisaltesse](#) on Fri, 13 Nov 2009 22:30:23 GMT

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the reason why we think this is wrong is because:

1. when the load spike occurs, all sites on all vps become very slow...
2. these 6 VPSs were migrated from in intel 5400 series and the load overage there were around 1 and rarely went above 3.

This is the only comparison that we have.

Subject: Re: Can OpenVZ use Intel VT-d on Nehalem server?

Posted by [ramjet](#) on Fri, 13 Nov 2009 22:39:06 GMT

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So you had 6 hardware servers where the load could reach 3 and now you have consolidated them into 6 openvz containers on the same host and are seeing load spikes between 23 and 30?

Subject: Re: Can OpenVZ use Intel VT-d on Nehalem server?

Posted by [hisaltesse](#) on Fri, 13 Nov 2009 22:42:00 GMT

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No we had 6 openvz vps running on a previous server with intel xeon 5400 series and we migrated the 6 vps on the new intel nehalem 5520 and now we have this outrageous spike every hour or so...
