Subject: Hardware loading questions
Posted by VulcanRidr on Fri, 15 Jan 2010 13:08:59 GMT
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I was wondering about hardware loading in openvz, and specifically how it applies to my situation. I have two OpenVZ boxes, one is an IBM box (yorktown) with a 2.8GHz P4, 2GB of RAM and 8GB of swap. The second, prometheus, is a Dell 2550 with 4GB of RAM, 2GB swap (I need to bump this up). What I am wondering is how many VMs I can reasonably expect to run on this hardware. Here is what I have on these machines currently:

yorktown:
* Fedora 11 test box
* Debian mediawiki install
* Debian Zenoss install
* Debian log server (running splunk)
* Debian DNS server
* Debian cfengine server (and possible FAI server)

prometheus:
* Debian AlFresco install
* Debian AutoNessus install
* Ubuntu test desktop
* (as yet) unallocated Debian machine (possible FAI server?)

Until last night, all of these machines were running on yorktown, but I started seeing some strange errors on yorktown, like the networking dropping out. I fiddled around with it, restarted yorktown, but could still not reach the VMs, even after rebooting the HN. I ended up having to reboot each VM individually afterwards. There was nothing in the logs. I ended up migrating the four boxes off of yorktown to prometheus. So far today, everything seems to be working. I figured I woudl migrate the boxes and try to figure out what the problem was later after consulting with you fine folks. (I would do it on IRC, but that is restricted at work...)

Right now, top is showing me the following:

prometheus:
top - 08:06:00 up 3 days, 14:46, 2 users, load average: 0.00, 0.00, 0.00
Tasks: 140 total, 1 running, 137 sleeping, 1 stopped, 1 zombie
Cpu(s): 0.3%us, 0.2%sy, 0.0%ni, 99.5%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 3893072k total, 3811312k used, 81760k free, 427236k buffers
Swap: 1951856k total, 156k used, 1951700k free, 2782380k cached

and yorktown:
top - 08:06:17 up 14:07, 2 users, load average: 1.34, 1.08, 0.73
Tasks: 209 total, 1 running, 208 sleeping, 0 stopped, 0 zombie
Cpu(s): 24.8%us, 2.3%sy, 0.0%ni, 72.6%id, 0.2%wa, 0.0%hi, 0.2%si, 0.0%st
Mem: 2073688k total, 1933728k used, 139960k free, 103920k buffers
Swap: 7815580k total, 456k used, 7815124k free, 871652k cached

If someone could do some expectation management, I would really appreciate it. And if you have some way of giving me suggestions on how to optimize (short of getting new hardware, which will happen when I can find a deal/donation (these are systems at home), it would be great.

Thanks,
--vr

Subject: Re: Hardware loading questions
Posted by nuno on Fri, 15 Jan 2010 13:58:21 GMT
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Quote:
prometheus:
top - 08:06:00 up 3 days, 14:46, 2 users, load average: 0.00, 0.00, 0.00
Tasks: 140 total, 1 running, 137 sleeping, 1 stopped, 1 zombie
Cpu(s): 0.3%us, 0.2%sy, 0.0%ni, 99.5%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
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This one is doing nothing at all.

Quote:
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top - 08:06:17 up 14:07, 2 users, load average: 1.34, 1.08, 0.73
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Mem: 2073688k total, 1933728k used, 139960k free, 103920k buffers
Swap: 7815580k total, 456k used, 7815124k free, 871652k cached

This one has a 0.75 15mins load and has half of the RAM free. So both can be loaded further.

If you have problems i sugest inspecting /proc/user_beancounters

Regards,

Subject: Re: Hardware loading questions
Posted by VulcanRidr on Fri, 15 Jan 2010 16:28:10 GMT
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Thanks for your advice, Nuno.

nuno wrote on Fri, 15 January 2010 08:58Quote:
prometheus:
top - 08:06:00 up 3 days, 14:46, 2 users, load average: 0.00, 0.00, 0.00
Tasks: 140 total,   1 running, 137 sleeping,   1 stopped,   1 zombie
Cpu(s): 0.3%us, 0.2%sy, 0.0%ni, 99.5%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 3893072k total, 3811312k used,   81760k free,   427236k buffers
Swap: 1951856k total,   156k used, 1951700k free, 2782380k cached

This one is doing nothing at all.

True, I just migrated these machines from yorktown last night.

Quote:
and yorktown:
top - 08:06:17 up 14:07, 2 users, load average: 1.34, 1.08, 0.73
Tasks: 209 total,   1 running, 208 sleeping,   0 stopped,   0 zombie
Cpu(s): 24.8%us, 2.3%sy, 0.0%ni, 72.6%id, 0.2%wa, 0.0%hi, 0.2%si, 0.0%st
Mem: 2073688k total, 1933728k used,   139960k free,   103920k buffers
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Regards,

[/quote]

I have done that, however, I really havent gotten my brain around how you tweak things in a rational manner. I have taken to just tuning a parameter until it quits complaining. For instance, I have the following issues with the machines on yorktown:

Wiki server:
lockedpages   0   107   256   256   3

(For this, do I vzctl set <CONTAINER> --lockedpages 120:256 --save ?)

The same goes for some of the other parameters. The docs are somewhat vague when it comes to the optimum settings for them. For instance, I have three VMs that have failcnts of 3 for lockedpages, and one (the log server/splunk box) that has failcnts of 33 and 38 for privvmpages and tcpsndbuf respectively. privpages on this box is set for 123768   261816   262144   262144. tcpsndbuf is 232448   1722432   1720320   2703360.

is there a "for dummies" book on setting parameters based on user_beancounters?

Thanks,

--vr