

Re: What hardware components bottleneck Linux?

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From: Al Dykes (adykes_at_panix.com)

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In article <pan.2005.02.14.05.08.33.723382@zianet.com>, ray <ray@zianet.com> wrote:

>On Sun, 13 Feb 2005 20:31:26 -0800, Mike wrote:

>

>> Rather than asking what hardware you would recommend, let me approach
>> it from the other end. What components in a desktop system are most
>> likely to cause a performance bottleneck in a Linux system?

>>

>> To make it interesting, I want to run Apache, I don't expect the world
>> to come knocking, I will likely run a relational database such as
>> MySQL, and I want to spend about \$500 on the tower; no mouse, keyboard,
>> display included in the price. How should I allocate my money to
>> maximize total system thruput?

>>

>> First, am I missing anything from the following component list? CPU,
>> RAM type, RAM size, bus speed, cache sizes, disk access times, multiple
>> disk arms, NIC.

>>

>> Second, does the Linux distribution that I pick influence the answer?

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>> Third, which of these components is Linux most sensitive to?

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>> Lastly, are there any rules of thumbs for picking component mixtures so
>> as to avoid bottlenecks? "No bottlenecks" is defined as the entire
>> system failing at once when response time hits the elbow in the
>> response time vs. load curve. Pointers to pertinent URL links would be
>> appreciated.

>>

>> --Thank you,

>> --Mike Jr.

>

>I expect the bottleneck is going to be your internet connection. Typical
>broadband connections are limited to 1.5mbit/sec or thereabouts - so a
>gigabit card is not going to help. Next is probably going to be disk
>access.

>

comp.os.linux.hardware: Re: What hardware components bottleneck Linux?

You don't know what your bottleneck is until you've hit it, or something like that.

If you have residential DSL service is generally slower upstream than incoming. As slow as 128kb upstream. That's the speed an external user sees if he hits your web server. Cable broadband is typically symmetric. Check the TOS for your broadband service. They may preclude running a server or have other obnoxious fine print.

As for the general question, there are too many variables and you have to start somewhere. Bottleneck analysis is very personal. You need to build an application and measure what it's doing when you think it should be faster, make changes, and then measure again because the bottleneck has shifted to something else.

IMO the single biggest hog on a workstation is the fancy GUI (these days gnome or KDE by default). Nice, but people who run servers or performance-limited computers frequently ignore the GUI entirely or switch to a much lighter one, but I'm in over my depth here.

Start with a fast CPU and 512MB memory. Disks and memory can be added as needed.

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a d y k e s @ p a n i x . c o m
Don't blame me. I voted for Gore.