

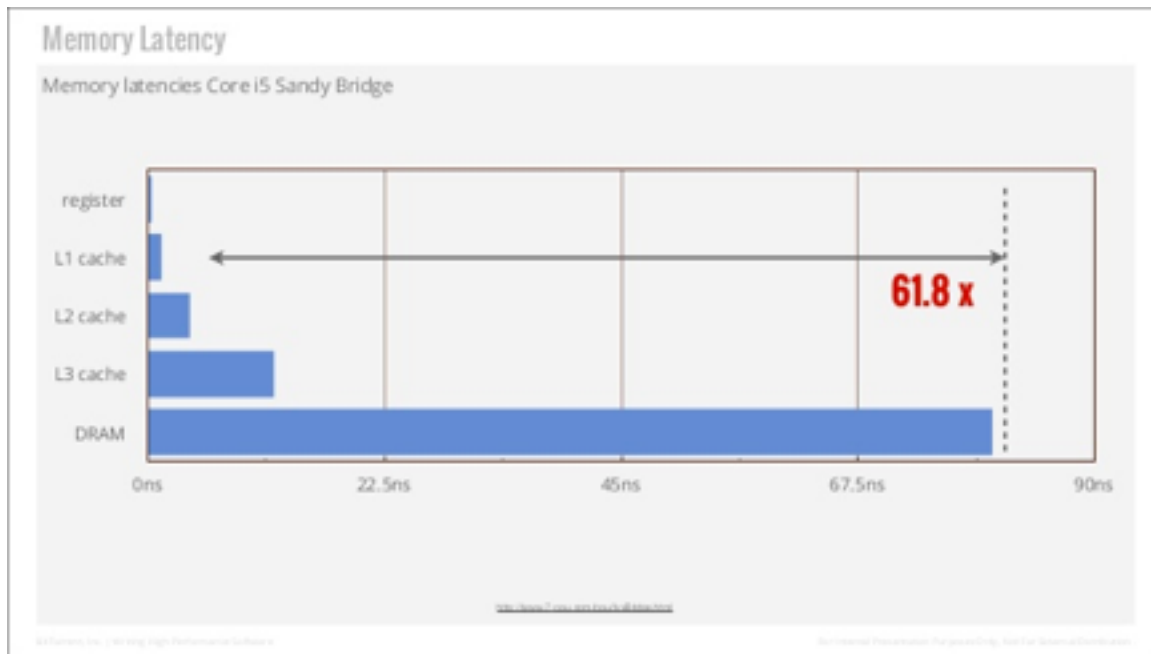
Performance

cs5356

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Performance Basics: Memory



CPU Usage is 100%
Waiting for Memory

Cache Misses Slow
Down Your Application
2x

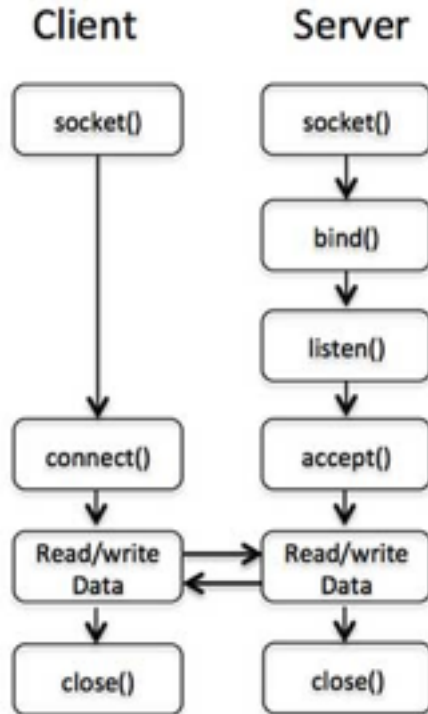
Context Switching

thread and process
switching

user space vs. kernel
space

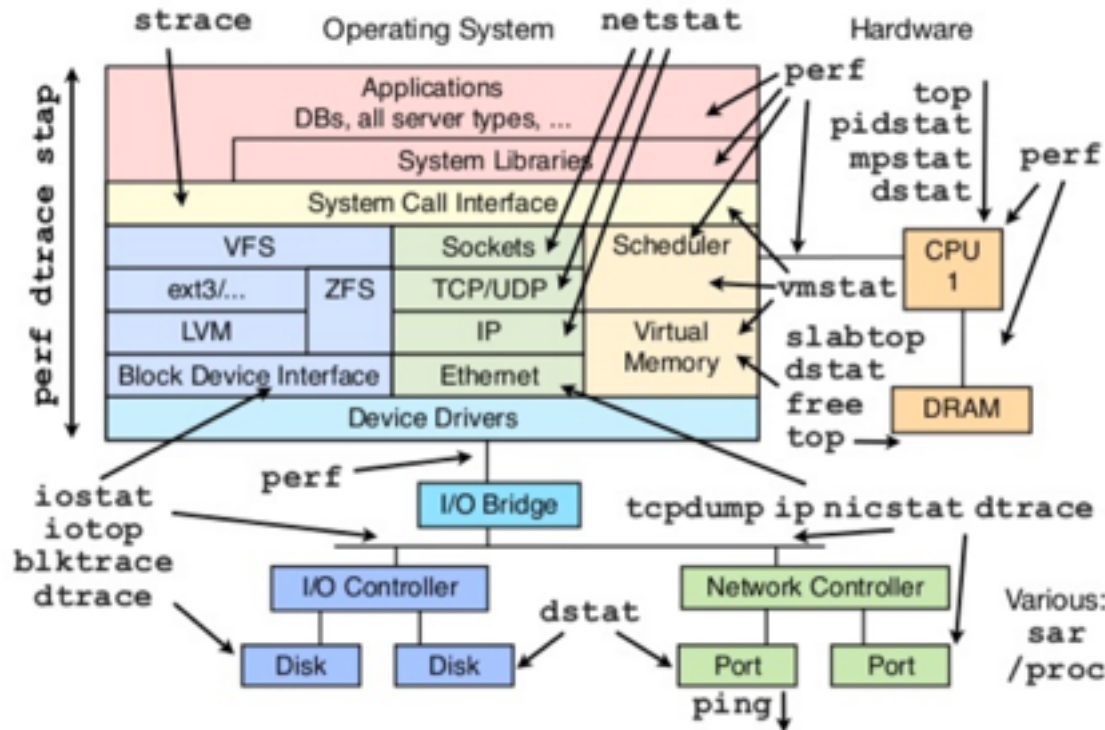


IO Wait



fork a new process
create a new thread
model as a state machine

Tools



Back to Reality

“The website is slow.”

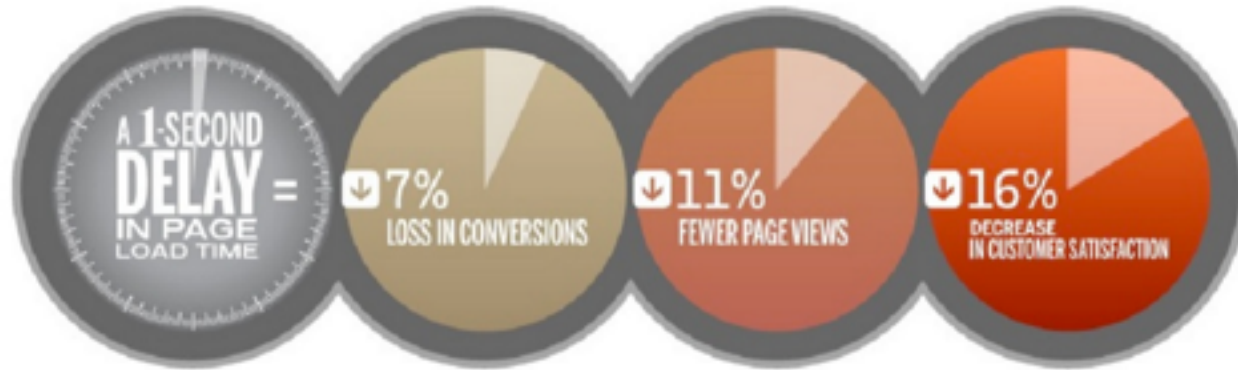
- Very Important Investor

Back to Reality

“The website doesn’t scale.”

- Very Important Investor

Performance Matters



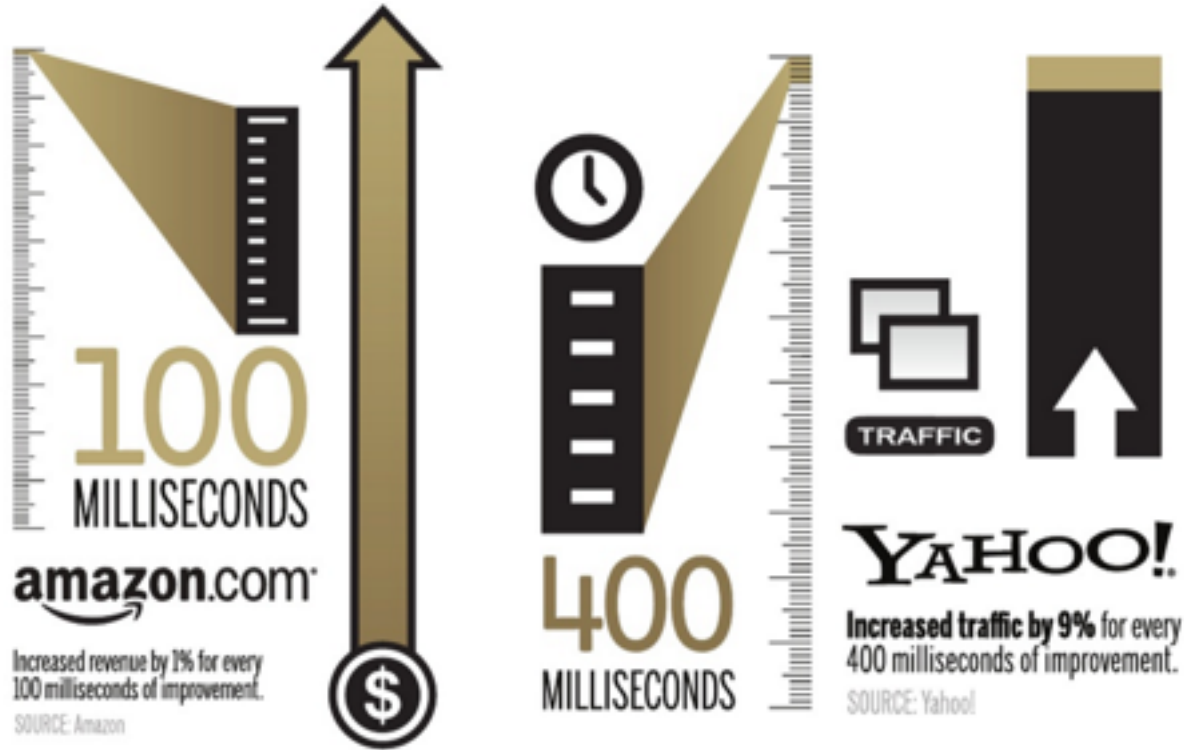
IN DOLLAR TERMS,

this means that if your site typically earns \$100,000 a day, this year

you could lose **\$2.5 MILLION** in sales.

SOURCE: Amazon blog

Performance Matters



Performance Matters



Sped up average page load time from 6 seconds to 1.2 seconds.
Results: Increased revenue by 12% and page views by 25%.

SOURCE: Shopzilla

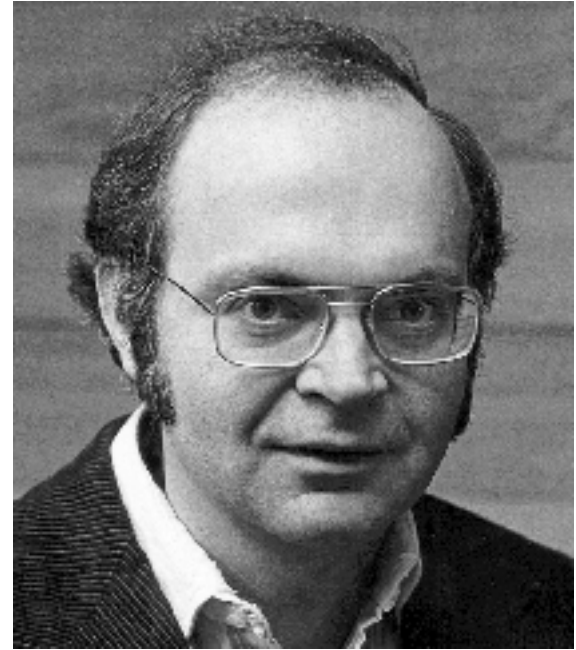
So ...

Let's make everything fast ...

Premature Optimization

*“Premature optimization
is the root of all evil”*

- Donald Knuth



Measuring is Not Premature

Latency

how long it takes, eg. request time in ms

Throughput

how much can happen at the same time, eg. tps

Guest Speaker



<http://www.meetup.com/Web-Performance-NY>

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