

# Real Life Performance

What is the computer actually doing?

# My computer is running slow, what do I do?

Do you mean “Quake 4 is only running at 30 frames per second in ultimate 3-D mode” or “My computer is taking 5 minutes to boot up”?

Most of the performance benchmarks that you see on the Internet measure a very specific type of performance - calculation intensive computing.

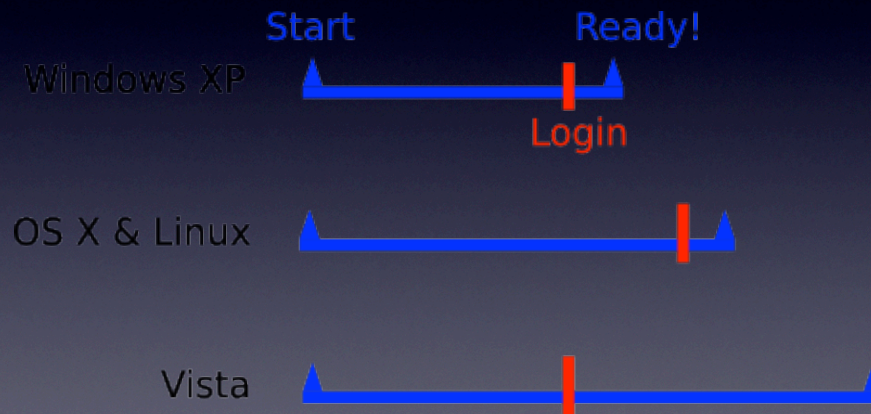
It's easy to measure objectively but not particularly relevant to most of us.

# Boot Performance

It's all about the hard disk:

- Flash Memory (SSD, usb) - reads fast, writes slow
- Hard Drive - scans fast, seeks slow

# Psychology & computers



# Security = Performance

The spyware scanner that you recommended found 3800 infestations on my computer but now that I've removed them I get a funny message at boot up...

- *Actual NIPCC quote*

# Web Performance

We used to think that it was all about the network, but these days the client is more and more involved...

# Lying with Numbers - watch the units!

MBit vs Mbyte (8 Mega bits)

GB disk 1,000,000,000 vs

GB actual 1,073,741,824 (1024 cubed)

# Network Performance

Your Internet Router has a cheap 100 MBit/S hub in it -- so copying a 10GB file will take ...

# Network Performance

So copying a 10GB file will take :

8 sec per 100 MB => 13 min

Half Duplex => 26 min

50% Utilization => 52 min

# Network: Security -vs- performance

Wireless routers:

WEP etc are **encryption** => that delay for each web page is your computer (and the router) doing a huge factorial calculation.

# Hard Disk - internal

- Defragmentation doesn't matter - until it does
- Capacity increasing exponentially while speed increases linearly
- 5400 RPM is **MUCH** slower than 7200 RPM

# Hard Disk External

- Big files are different than small files (watch a crappy 10 year old HDD beat the pants off a brand new USB memory stick)
- The interface matters - even if the speed's supposed to be the same
- 5400 RPM is **MUCH** slower than 7200 RPM

# Burning DVD's

- cheap burner
- cheap media

# Finally...

If you're doing graphics, video, or gaming...  
It *is* all about the CPU after all