Cloud – what is it (not) good for?

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What is a cloud?
The crowd is saying

- ..... smoke, mystery network, toilet paper,....

- 22% admit they fake having a clue at job interviews, dates,....
What is a cloud?

- Scalable and elastic
- Shared
- Metered by use
- Uses internet technologies
- Centralized
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- ....... => performance problems.
Scalable and Elastic

(Large) Hosting business very much as usual ......One need to pay for reserved capacity and not used capacity....... 

But for non hosting business the terms scalable, elastic, pay by used can be true.
Sharing a line

Telco’s need rapidly to build out ....
But business is going down.....
 stil earning money)

While end users and internet capacity is going rapidly up, we still have limited peering etc. resources

Scale as you like, when you like, and pay for use is still a dream

...and business owners should be aware
Moving back and forward I

• Underlying concept of cloud from 1950’s....multiple terminals sharing the same mainframe/resources

• But the PC became affordable...

• And now we are moving back again to share etc.
Moving back and forward II

Latency, RTT, delays
Without cloud

Input/Output
Moving back and forward II

Internet
Input/Output
Just been addressing:
World wide waiting problem

One CDN: +100k servers,
70+ countries, 2k networks
Distance=Latency=Less customers

One second delay reduces customer conversions by 7%.
One second delay decreases customer satisfaction by 16%.
One second delay decreases page views by 11%.
How bad is it?

Gbps

10 kbps

100 mbps
Many tricks and improvements going on

Large companies are trying to make TCP more modern

….. but

\[
\text{Throughput} \leq \frac{\text{MSS}}{\text{RTT} \sqrt{P_{\text{loss}}}}
\]
Cloud: The good story

- Philosophy: Software as a service
- Even the smallest business can start up without thinking about infrastructures
Cloud: but be aware

• It don't just scale ......

• If moving large data customers might having problems with your service...
The End