



Introduction to Cloud computing

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Agenda



- Internet Apps
- Cloud computing basic concepts
- GLC Introduction
- Cloud Computing PROs & CONs
- Question and answer

Are they part of your life?

- Computer
- Internet
- Email
- Facebook
- Peer-to-peer



Can you live without them?

Source:

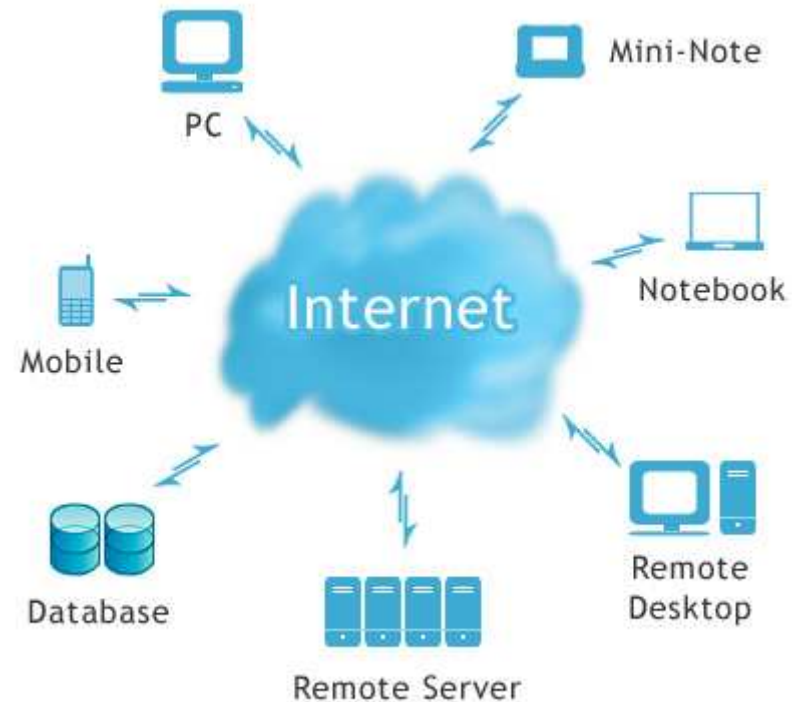
<http://ironink.files.wordpress.com/2009/02/yahoo-mobile.jpg?w=450&h=436>

http://www.sobelmedia.com/wp-content/uploads/2009/09/googleapps_medium.jpg

So, everything is connected to the internet?



- Mobile phone
- Fridge?
- Cameras?
- Laptop
- And more...



Source:
<http://blogs.amd.com/virtualization/wp-content/uploads/2010/02/cloudcomputing-21.jpg>

New paradigm: human network



With current internet technology, you can:

- Share files (audio, video, streaming)
- Build apps (eg. Graphics, mail, word, social networks)



Source:

http://lonewolfibrarian.files.wordpress.com/2009/08/human_network1.jpg

Internet access becomes handy and mobile: forming a **Human Network**

Cloud Computing (CC)



Many definitions out there.... Confusing!!

Well, let's sum up:

**A concept of using the internet/network to
provide Everything as a service (EaaS)**

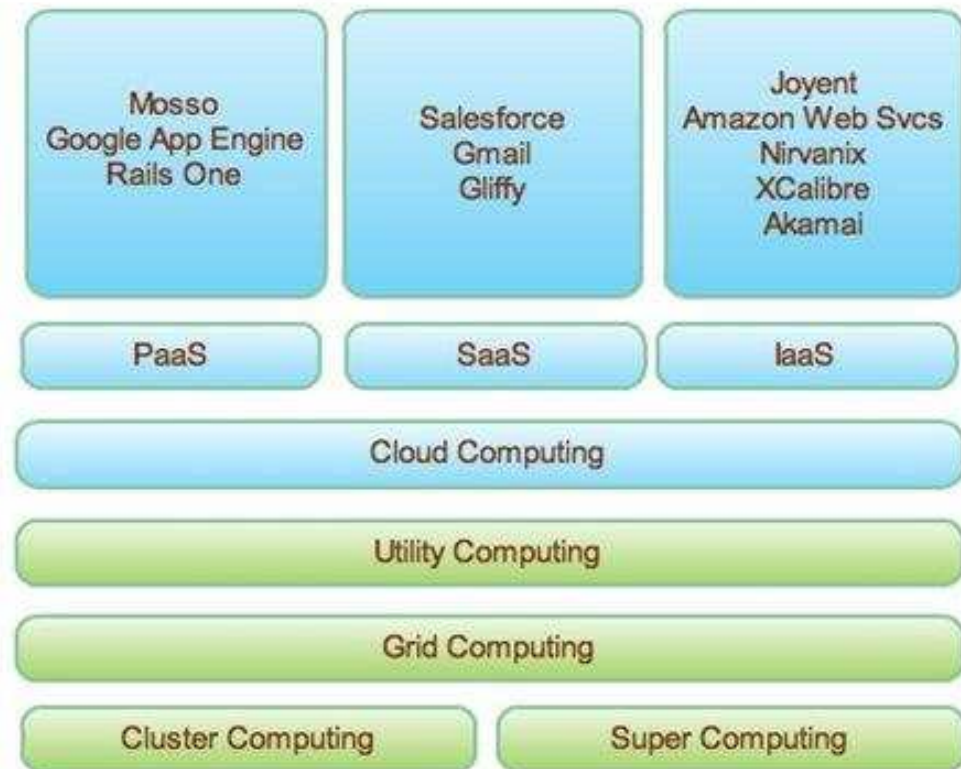
New paradigm: sell **services** instead of products

Everything as a Service (EaaS)



- **IaaS**, Infrastructure as a Service (RAM, CPU, Storage)
- **PaaS**, Platform as a Service (frameworks)
- **SaaS**, Software as a Service (eg. Text editor, cpu, storage)

Cloud Computing



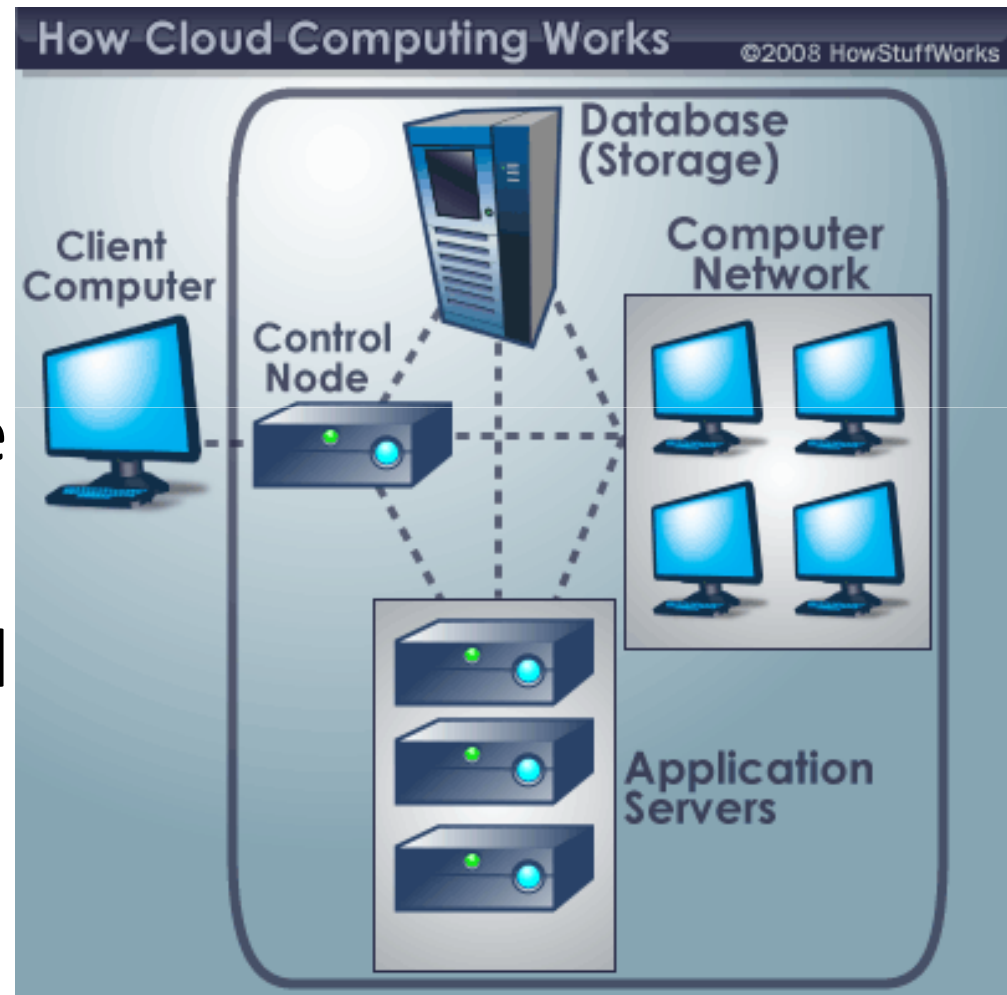
1.0 In blue you have what is lately called Cloud Computing. In green, some of the underlying work done that led to Cloud Computing. At the top are examples of each XaaS type.

Source:
<http://www.newsandreviews.in/media/blogs/MKJ/Technology/ComponentInCloudComputing.JPG>

How it works?

Tech involved:

- **Distributed** computing
- **Grid** computing. Like a power grid
- **Virtualization** of real machines



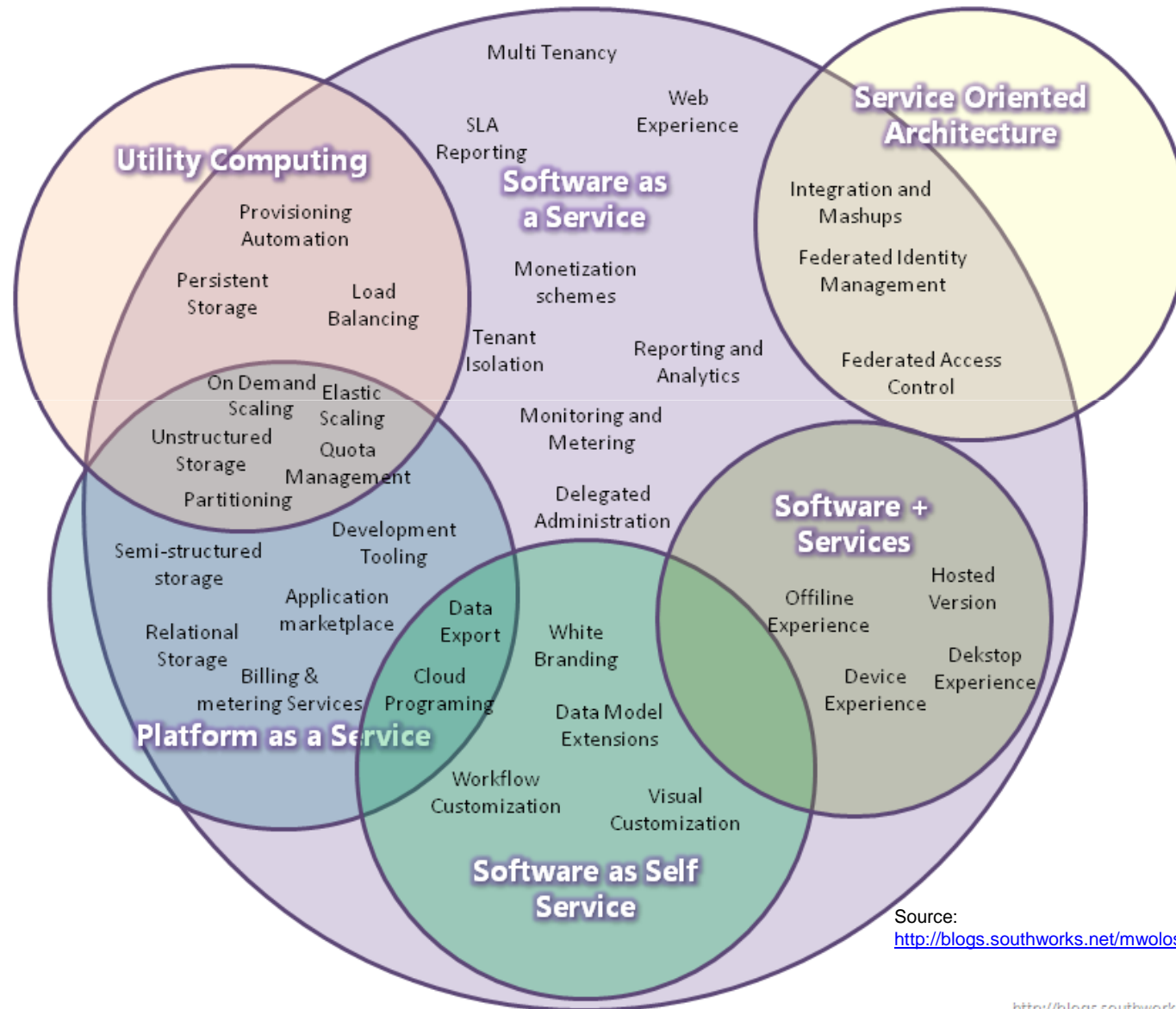
Source: <http://computer.howstuffworks.com/computer-networking-pictures.htm>

Cloud Computing Providers



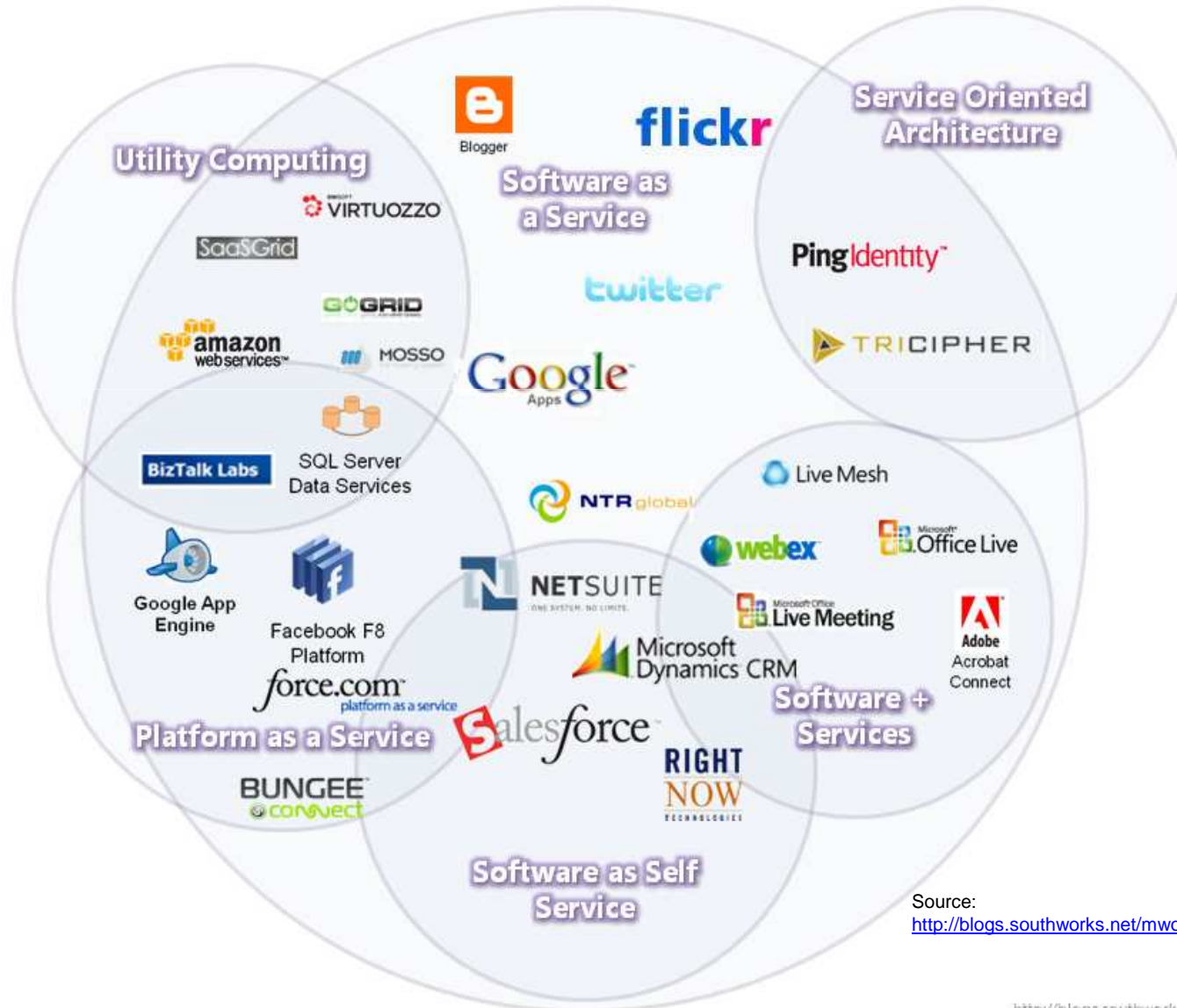
Source: <http://www.boston.com/business/ticker/cloud320.jpg>

Cloud taxonomy (1)



Source: <http://blogs.southworks.net/mwoloski/files/2008/08/posterfeatures.png>

Cloud taxonomy (2)



Source:
<http://blogs.southworks.net/mwoloski/files/2008/08/posterservices.png>

Break...



Intro to GLC Learning Center



www.gclearningcenter.com

GLC Learning Center



- **What:** an organization that provides online training, workshop, and webinar.
- **When:** since january 2008
- **Vision:** provide affordable training, workshop, and webinar for indonesians
- **Benefits:** flexible, online, saving transport

GLC background



- Meningkatkan skill engineer indonesia.
- “lulusan IT banyak yang **mengecewakan**” ref: detik.com, 16 january 2010
- Beberapa lulusan IT memang mengecewakan.
Anak informatika ngak bisa coding? OMG...!!
Ref: pengalaman pribadi
- Masih sedikit orang indo yang jadi **expatriate**
- Masih sedikit orang indo yang **certified engineer**

GLC training & workshop



- **Operating System:** fundamental, system admin, network & security admin. Setara dengan Sun, RH training
- **Networking & Telco:** CCNA fast-track, GSM fundamental, UMTS, Signalling
- **Database:** SQL fundamental, oracle, mysql, postgresql
- **Programming:** Java, shell programming, php-mysql

How the online training looks like?



- Online presentation
- Online materials
- Online demo
- Online access to GLC server in the internet.

Demo.....

Next events...



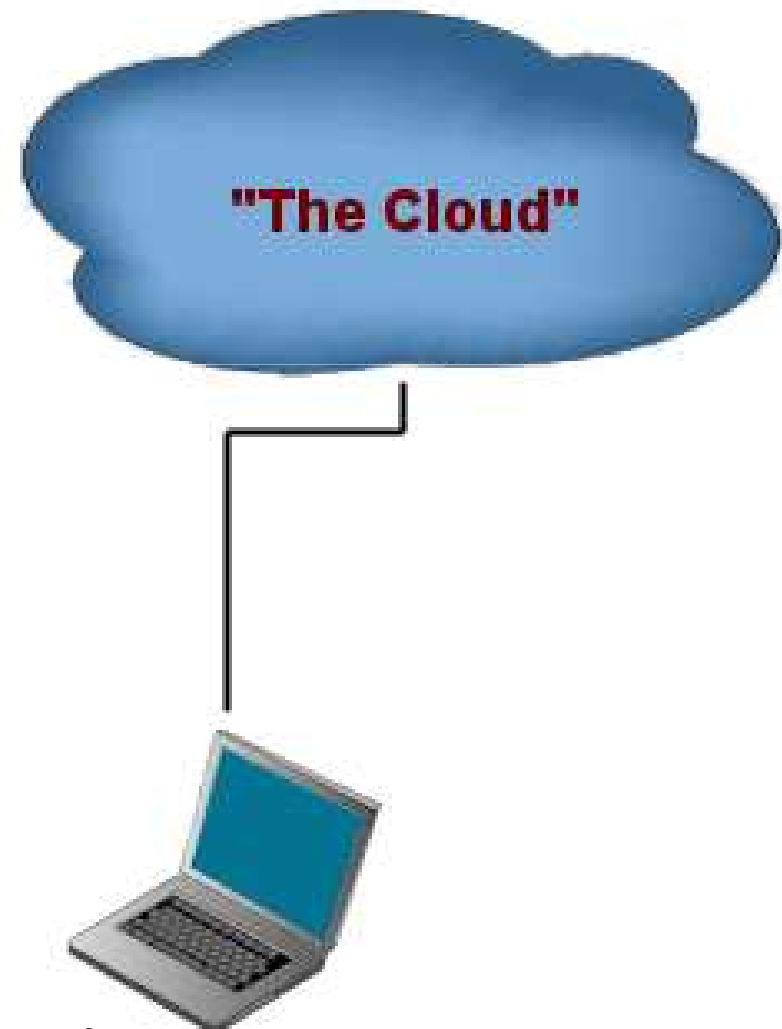
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- **Website:** <http://www.glclearningcenter.com>
- **Facebook**
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<http://campus.glclearningcenter.com>

Now back again...

Why don't you try it?

- <https://spreadsheets.google.com/ccc?key=0AjBiZm0-D7WdEpyVnREbkk2ZjVVTEhHbFNKdDluT0E&hl=en>
- <https://docs.google.com/Doc?docid=0ATBiZm0-5D7WZGdxNzVicXJfNDZmbmNnejVnOQ&hl=en>



PROs & CONs



Source:
http://speeches.ofset.org/jrfernandez/2009/sl_y_educac/images/cloud_computing_pros_cons_big.png

CC Characteristics

- As provider:
 - Centralization
 - Easy to be monitored
 - Efficient
- As customer
 - Low Capex: no worries about hardware
 - Low maintenance: labour, tasks, hardware
 - Flexibility, Scalability, Reliability, Availability



Source:

http://speeches.ofset.org/jrfernandez/2009/sl_y_educac/images/cloud_computing_pros_cons_big.png

CC In short



If want you need is a **milk**,
why do you buy a **cow**?

Source: http://agusarnold.files.wordpress.com/2009/08/ist2_9788045-cow-with-milk-bucket-cartoon.jpg

However...

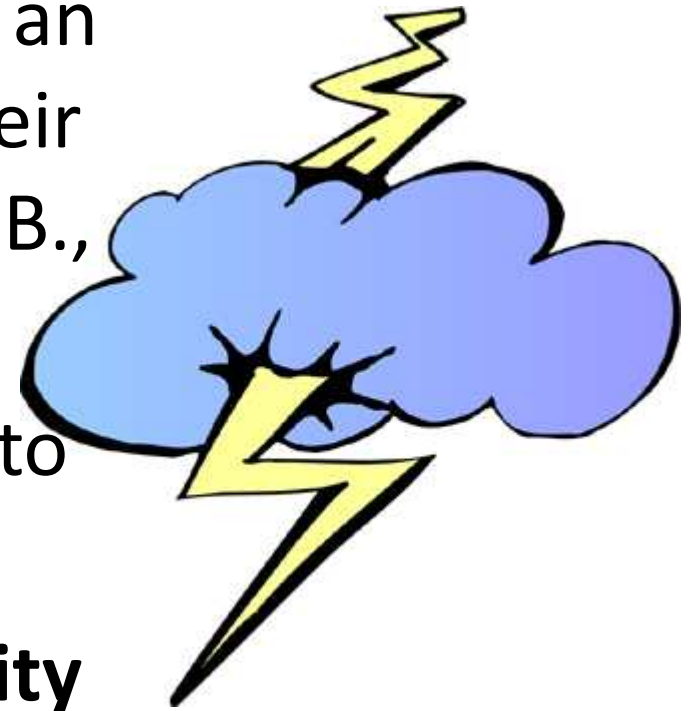
- Vendor lock-in. Jonathan Weber (2008)
- Data owner
- Source code availability. Richard stallman (2008)
- Political issues (2008).
Storage location?
- Not always cheap



Source:
http://speeches.ofset.org/jrfernandez/2009/sl_y_educac/images/cloud_computing_pros_cons_big.png

Risks...?

- **Human error.** Cannot be predicted. On January 31, 2009, Google cannot be accessed globally for about an hour due to human error in their bad-ware block list. (Warfield, B., 2009)
- **Downtime** of the system, due to failure.
- **Security, Privacy, confidentiality**



Source: <http://lonewolf librarian.files.wordpress.com/2009/07/cloudbolt-729505.jpg>

CC for Indonesia? issues

- Good news
- Bandwidth is still expensive commodity
- Lack of Infrastructure
- Desktop applications still dominate the markets



Source: <http://www.indonesiamatters.com/images/indonesia-map.gif>

Opportunities



- CC is a matter of access
- Local vendor can get involved in cloud computing market

Thank You



- Q & A

Please put your suggestions, ideas, or any other input about GLC or webinar

here:

<http://www.gclearningcenter.com/saran/>