



Top 10 reasons to go to cloud....

Top 10 reasons to practice caution...

### Top 10 Lists

Top 10 reasons to go to cloud....

1. The ability to scale up IT capacity on-demand. The primary characteristic of the Cloud is that it behaves like a utility or equipment rental. You pay for what you need when you need it, the price is higher per minute in most cases but if you only need 10 minutes it is a lot cheaper than owning it for three years. The key was extending the business model so that services and equipment could be provisioned in near real-time and remotely.
2. The ability to align use of IT resources directly with cost. Since IT costs have traditionally been viewed and implemented as capital or baseline overheads it has been difficult to manage them in conjunction with demand. In micro economics we would refer to the concept of elasticity of supply allowing supply to match demand. To properly manage a company it is best to align costs and cost responsibilities with causation so that you can make rational decisions. Further, the elasticity of supply of IT resources allows you to better optimize the mix of resources provided for a particular solution.
3. The ability to provide more IT agility to adapt to new business opportunities. The use of open standards for web services combined with the increasing power of Rapid Application Development platforms combined with the whole idea behind code reuse and composite applications allows the company to repurpose or rapidly provision new capabilities, often largely built from the existing capabilities. Agility is often used here as well, the point is that the enterprise has the ability to rapidly and flexibly adapt to changing environments with a minimum of friction. Turning off resources and the obligations associated with them can be as important in this mix as being able to turn them on when you need them.
4. The ability to mix and match the right solutions for the business without having to purchase hardware and software. This is a recasting of the rent what you need when you need it versus buy it and always have it story. There is, however, an important but subtle exception; by renting you can enter the fray with minimal up front entry costs until you are sure you have the right answer. The Cloud supports prototyping, testing, production evaluation and low cost market entry extraordinarily well.
5. The ability to place business volatility into a single domain...the cloud. This captures the concepts of risk and thrashing of IT infrastructure and the ability to place the technical risk on the heads of those providing capabilities. In addition, the constant thrashing of versions and upgrades becomes someone else's problem. So this scary, boiling, festering mess that is IT and all the incumbent issues surrounding security, SLAs, backup, reliability, current state of the art and so forth are no longer your problem.
6. The ability to reduce operational costs, while increasing IT effectiveness. There are a lot of inefficiencies and mis-matches in the average IT organization. The server jock or exchange administrator that could handle 10 servers or 400 users but only has 5 servers or 50 users. By outsourcing these types of efforts operational

overheads are more efficiently spread to someone that has larger scale, the Cloud provider, resulting in lower operational costs. The other reduction is the straight forward limitation of rent to the time of use. For example, traditional IT shops have had to maintain duplicate capabilities to facilitate unit and production testing of new systems. These largely sit idle for long periods of time, now with the Cloud they can be shared between all the users.

7. The ability to manage huge data sets.

The web, social networks, Internet search and the like have presented the problem of how to analyze huge data sets, particularly of poorly structured data. Google solved this problem first and it has been viewed as a cloud capability but this is only partially true. The Cloud specifically allows you to run massive processing jobs on huge stacks of data and when you are done you can turn the processors off and stop paying for them. There are thorns here depending on the nature of the data sets, the desire to store them permanently and additional questions about whether the data is proprietary and/or confidential.

8. The ability to create customer-facing systems quickly. You can put up a web application instantiated on 50 parallel servers with tier 1 access to the Internet in a couple of hours. Try this without the Cloud. Anything facing the Internet and used by customers, employees, partners, etc. can be done faster in the Cloud.

9. The ability to shift capital dollars to other places needed by the business. This is fairly simple, eliminate capital expenditures and replace them with straightforward operating costs. Buy a backhoe or rent it for two hours, the same decision a builder makes everyday applied to the IT world.

10. The ability to balance processing between on-premise and cloud systems. As with all peaking systems, baseline demand at sufficient scale is probably more cheaply served by owned infrastructure lower load factor uses at some point becoming cheaper to rent. Do you want to build your own hotel room, rent a condominium or own a house; it depends on use characteristics and if you want to spend your retirement in Key Largo or traveling around the world. The same principals apply, IT is the same as all other industries once it can be viewed in the correct dimensions.

Top 10 reasons they have to be careful:

1. Security is largely immature, and currently requires specialized expertise. This is the looming disaster of our age. Too little money and attention are paid to it and the vulnerabilities are massive. Think of the difference in perception of offshore drilling now versus a couple of months ago. BP did not invest in the technology to protect themselves and they are losing billions of dollars. This is the same problem, what is the risk to your company of your data, designs, plans, operating history, financials or applications falling into the hands of competitors? What are the risks associated with the Internet being shutdown by a DDOS or other attack to your ability to continue efficiently doing business.

2. Much of the technology is proprietary, and thus can cause lock-in. If you put your "stuff" on vendor X's platform and you invest programming dollars against building a system on their infrastructure and it is not compatible with any other vendors product you run the risk of falling prey to the avarice of the vendor and will

suffer if they falter. There are currently few simple answers to this problem, they will come and customers can go into the Cloud with their eyes wide open and minimizing their risks.

3. You're dependent on the cloud computing provider for your IT resources, thus you could be exposed around outages and other service interruptions. You do not have control, their resources are remote, and telecom dependent. The same questions that face the data center here face the Cloud except it is someone else's data center.

4. Using the Internet can cause network latency with some cloud applications. The Internet is not the same everywhere: network hops, bandwidth, jitter, provider redundancy, contention, reliability, security can all affect the risks and performance of applications on the web.

5. In some cases cloud providers are more expensive than on-premise systems. Designed against an equipment rental model many vendors charge a premium for their services by the minute, hour or day. If your storage is permanent, probably the most expensive thing you can do is place it in the Cloud. This is one of the primary drivers behind private Clouds.

6. Not in control of costs if subscription prices go up in the future. This is self explanatory, and the issue is aggravated by vendor lock-in.

7. Integration between on-premise and cloud-based systems can be problematic. Hence hybrid Clouds. Enterprises strive to minimize the technical permutations they have to deal with. The ideal situation is the seamless symmetric use of private and public resources without the programmer/developer or user noticing a difference, this is not the case today. The public clouds are not the same as what enterprises are deploying internally although this is changing rapidly.

8. Compliance issues could raise the risks of using cloud computing. Security is important here as well as data recovery in the event of Cloud failure. Most compliance issues revolve around provability, auditability and protection from disclosure. We can help in all these arenas but it is important to understand the implications and requirements of various laws/regulations.

9. Data privacy issues could arise, if your cloud provider seeks to monetize the data in their system. Their own security practices are an issue here as well. But the issue referred to here is the distrust that Google and others will not try to mine the vast stores of data housed in their environments for valuable information and essentially leak proprietary or personal data to those that will pay for it or use it for their own purposes in ways that end up competing with you.

10. M&A activity around cloud providers, could mean constantly adjusting and readjusting your cloud computing solutions. All of the other issues come together here. If someone buys a company they get the data and data centers too.