10 questions every business must ask about cloud computing

Information technology moves forward in bursts of innovation. First, there were mainframes and mini computers, and then in the 1980s IBM created the first personal computer and it ran Microsoft DOS. The latest wave of change is cloud computing. But it means many things to many people, and it can be difficult to understand.
Hype isn't enough, so we've created this small business guide to cloud computing to help you understand what it is, how you can use it in your business and how to evaluate different online services.

1. What is cloud computing?

If you use a webmail application like Windows Live Hotmail or an online service such as Facebook, you're already using a type of cloud computing. Unlike conventional software, which runs on your own PC, cloud computing (also called software-as-a-service or SaaS) means running applications over the internet. Examples include web-based email, customer relationship management or web conferencing.

Typically, you pay for cloud computing applications on a per user, per month basis rather than paying up front for hardware and software. Often this combination of advanced technology and predictable pricing makes it very attractive.

2. What can it do for my business?

One hundred years ago, if you wanted electricity you had to build your own power station. Now you just plug stuff into wall sockets. Ten years ago, if you wanted big company IT, you had to buy your own servers and install expensive software. Now, increasingly, you can access these services over the internet. This is a critical change for small businesses because it gives them access to services that were too complex or too expensive before.

- Email
- Office applications
- Backup
- File storage and sharing
- Working together on documents
- Share files and information on an intranet
- Shared calendars and other information
- Email security
- PC management
- Customer relationship management
- Online stores
- HR applications

There are also intangible benefits:

- **Resilience**. With cloud computing, if your computer is stolen, you can carry on working using any other web-connected PC.
- **Reduced IT costs**. With less hardware and software to manage, there is less demand for expensive IT support staff. Many online services come with community help and support. Your IT partners and in-house staff (if any) can focus on supporting the business rather than routine IT management tasks.
- **Security**. Data stored in large, well-protected data centres is likely to be safer than information on your laptop or a server in your office. Vendors have a strong vested interest in keeping intruders out, viruses down and data backed up.
- **Flexibility**. Your costs go up and down according to your requirements. For example,

if you use a hosted email server, you pay for each active user, so if your company expands

you'll pay more, but if it downsizes, your costs will fall. Also, if you need to increase capacity very quickly, for example to add more storage for a file sharing service, you can do it easily with cloud-based services.

- **Access to new services**. Cloud computing gives you access to advanced technology that may not be available or cost-effective any other way.
- **Easy upgrades.** Businesses get access to the latest technology and regular updates without having to deal with the actual upgrade process on their own computers.
- **Cash flow**. Expect to pay monthly rather than buy hardware and software up front. For growing businesses, this removes another barrier to advanced technology.

Examples from Microsoft include:

- Web services such as Hotmail, Bing Maps or search engines such as Bing
- Business applications such as Microsoft Office Web Apps
- File storage and sharing services such as Windows Live SkyDrive
- Customer relationship management applications such as Microsoft Dynamics CRM Online
- Email and communications systems such as Microsoft Online Services
- Hosted security and PC management services such as Windows Intune

3. Why is everyone excited about cloud computing?

Cloud computing delivers significant benefits because of the way it works:

- **New business models**. Typically, cloud vendors charge a per-user, per-month fee. This gives you a predictable price that goes up and down as your usage changes. This compares favourably with the big, upfront capital cost of buying your own hardware and software. It is an operational expense for tax purposes rather than capital expenditure, which simplifies your accounting too.
- **Economies of scale**. Big companies can run data centres with thousands of computers to deliver cloud services. It is much more efficient for you to 'rent' five percent of one of their servers than it is to buy 100 percent of your own.
- **Cost savings**. Because it is so efficient, it is also usually cheaper. You don't just save the cost of the hardware and software but also the IT skills and management time required to set them up and run them. For smaller businesses, cloud computing gives access to services that are often too expensive to run in-house, such as hosted intranet sites or communication systems.
- **Best practice IT**. Cloud vendors deliver higher levels of security, reliability and availability than most businesses can manage in-house. For example, most service providers offer availability service level agreements and ensure that your data is backed up and secure in multiple locations.

In short, cloud computing is an attractive form of outsourcing that gives you easy access to advanced technology.

4. How much does it cost?

As you would expect, prices vary from service to service and vendor to vendor. Although many online services are free, they come with adverts and may not be suitable for business use. Business class services and applications start at a few pounds per-user, per-month and some applications can cost a lot more. However, the price and conditions should be clear up front.

5. How do I evaluate different services?

Don't look at any single factor. For example, price is important, but if the service doesn't do what you want, it doesn't matter how cheap it is. On the other hand, don't fall for bells and whistles you don't need. A good place to start is to carry out a basic requirements analysis:

- What are my business needs?
- What will my employees do with the system?

- What benefits am I looking for – must-have and nice-to-have?
- What are the alternatives? Including 'do nothing' and 'buy in-house'.

What is my budget? Remember that cloud computing can give you access to new technology, new business models and new ways of working. It isn't only about finding cheaper ways to do what you already do today. So, working with a trusted IT partner, the final criteria for evaluation are to ask:

- What new capabilities can it bring my business?
- How can I make use of new features and opportunities it creates?

6. Is it right for me?

There are some reasons why you might not use cloud computing:

- Your internet connection is very slow or unreliable. This can be a challenge for companies in rural areas.
- You want absolute physical control over your data. Although cloud services are secure and vendors strictly control access to your data, some organisations may want or need the extra reassurance of having their data under their physical control.
- If you run a specialist line of business applications; for example, a hotel booking system or an estate agency database, you may not be able to integrate it easily with some cloud-based systems. It is worth consulting with your partner to ensure that it does.
- You need customised or bespoke applications. Cloud computing tends to work on the 'one-size-fits-all' model. If you need highly customised software, it may not work well for you. This is where a knowledgeable IT partner can be really helpful.

7. Can I test it?

It's a good idea to sign up for a trial period and run a new cloud service in parallel with your existing systems for a while to iron out any kinks and explore new features and benefits. You could also try a pilot wider deployment. Both routes are good practice and will ensure you get the most out of your investment.

8. Where is my data stored?

Your data will be stored in the vendor's data centres. Typically, they will store it in two or more facilities for redundancy and continuity. Before signing up, check where your data will be stored. Look for confirmation that their data centres are secure and well run. For example, Microsoft has nine layers of best-in-class security measures, including intrusion detection systems, and multiple data centres to provide a fully-operational backup. This lets Microsoft offer a 99.9 percent uptime guarantee.

Under the Data Protection Act and EU directives, anyone processing personal data must ensure that it is not transferred to non-EU countries without adequate protection. Check that your data will be stored in the EU or that if it is transferred outside the EU there is adequate protection, such as safe harbour agreements.

9. Can I get my data back?

Your data is your business's lifeblood. You need to be sure that you can get it back in a useful format if you decide to switch providers or move to a different system. For example, Microsoft gives you a choice between Microsoft-hosted, partner-hosted or on-premise systems and provides tools to move data, such as emails, from one system to another if you want to change. Make sure that other providers give similar options and reassurance.

10. How do I evaluate suppliers?

There are some basic questions you should ask about any provider that offers online services:

- **Size and reputation**. Will the supplier be around for the long haul? Do they have a good reputation? Has anyone recommended them?

- **Business focus**. Do they have a track record of working in your industry sector or with small and medium-sized businesses? Is this a scaled-up consumer product or a built-for-business service?

- **Support**. What support options do they offer? Do they have a partner network which can give you local support, if you need it?
- **Future options**. Does the supplier offer options to move to in-house systems or other platforms if your business changes or grows? For example, can you move your email from a hosted system to an in-house server?
- **Familiarity**. How much training will your staff need to use the new service? Is it like anything that they already use?
- **Data protection**. Look for detailed information about how your data is protected, backed up, stored and how you can get it back if you want to move suppliers.
- **Service level agreements**. Look for a strong commitment to meet promises, such as money back guarantees if the provider fails to meet uptime requirements etc.
- **Pricing**. Are you paying per month or per year? What happens if you change the number of users?

Next steps

Someone once asked Chairman Mao about the consequences of the French Revolution. He said, "It's far too early to say." It's the same with cloud computing. Although Gartner, an IT analyst firm, predicts that the market will be worth US$14 billion in 2013 (up from US$8 billion today)[1], the full implications of this revolution are still being played out. However, there is no doubt that nimble, small businesses will profit by taking advantage of the opportunities it presents.

For more information

Find out more about Cloud Solutions