



# Cloud Computing: Beyond the Hype

The information technology industry has always been beset by buzzwords. Today, the hype and industry noise around cloud computing is in danger of obscuring the benefits that organisations—especially within B2B e-commerce—can gain from adopting this new approach. This article looks at cloud computing and explains why it has an important role to play for every enterprise—whatever the size.

## Welcome to Definition Fatigue

When you put a whole group of analysts in a room and each has their own idea about what they believe they're describing, you know there's an issue. When the official NIST (National Institute for Standards and Technology) definition runs to over 800 words, you can bet there's going to be confusion. When Microsoft invests millions advertising cloud computing's ability to allow you to edit your photos online, you can be certain that there's a significant number of IT managers writing it off as a genuine enterprise platform.

The current marketing rush for every vendor to have “my product on the cloud” or “my service on the cloud” does no one any favors. But, with the waters so muddied, the question becomes, “Does it really matter?”. Why worry about a nice neat definition when the characteristics of cloud computing are widely accepted? In all instances, a cloud-based service should be:

- **Dynamic**—One of the keys to cloud computing is on-demand provisioning. The service is simply there when you need it.
- **Massively scalable**—The service must react immediately to your needs. It must gracefully handle peaks in demand and graceful dial down when demand bottoms. It is an elasticity that is seamless for the user.
- **Multi-tenant**—cloud computing, by its nature, delivers shared services. Whether that's different organisations on the public cloud or different departments and trading partners on a private cloud.

- **Self-service**—As a user, you can use the service as you require. If you are accessing more than one service from a provider, provisioning could be as simple as selecting from an online catalog.
- **Per-usage based pricing model**—You should only pay for the amount of service you consume, whether that's through subscription or “pay-as-you-go”.
- **IP-based architecture**—As the name suggests, cloud architectures are predicated on Internet technologies—although key to the development of cloud computing are the recent advances that have been made in virtualisation technologies.

This fundamentally technology-based description of cloud computing—although vitally important for creating cloud-based services—is a major roadblock in understanding its benefits. If the technology industry is really undergoing a paradigm shift where we move from focusing on the product or application to focusing on IT as a service, then the technology has got to be viewed as a commodity. For the large part, the consumers of cloud services should have no concerns as to how it works.

Recent research from the likes of IDC and IDG have confirmed that the two key drivers for businesses today are efficiency and agility. Business executives have learned lessons from the recent recession and are committed to running lean organisations. The costs taken from the organisations in the last few years will not quickly be returned. Secondly, they want organisations that are agile and able to react to change and opportunity. While the traditional model of IT provision has proven to be very poor in these key areas, cloud computing offers an attractive alternative, as this short comparison demonstrates:

The result of this is that cloud computing can help organisation evolve, as IDG Research elegantly puts it, from “IT as usual” to “IT as eagerly anticipated”. All the promise that traditional IT has failed to deliver to the business user can be strengths for cloud computing.

|  | Traditional IT  | Cloud Computing  |
|--|---|--|
| Speed-to-Market                        | Enterprise applications can take months or years to properly design, code, test and roll-out.   | The cloud provider is responsible for ongoing development. An organisation simply plugs into the most up-to-date application as required. Years becomes weeks or even days.  |
| Speed-to-Value                         | Even with iterative programming techniques, the final application is likely not to match current business needs. Yet it still has to be de-bugged and upgraded long before the budget is found for the next major release.  | Since providers only get paid for client usage, it is in their interest to bring required features to the market quickly. They conduct all development and testing, leaving the client to simply benefit from its usage.   |
| Speed-to-ROI                           | Many organisations never see the expected ROI from major development projects. This is a significant capital expenditure (CAPEX) with little predictable outcomes.  | There should be no—or very small—capital outlay. A subscription model where an organisation only pays for the service consumed is a highly predictable operational expenditure.  |
| Managing Total Cost of Ownership (TCO) | The traditional software pricing model places a heavy burden on most organisations—especially where more seats are purchased than ever used. But purchase price is dwarfed by the cost of ongoing support and maintenance, which can be over five times the initial purchase price. | There are minimal initial software or infrastructure costs. They are the responsibility of the service provider. All ongoing support and maintenance costs are rolled into the subscription fee.   |
| Managing Innovation                    | Technology deployment is always at least one step behind business need. Either a system has to be developed based on the need or a solution purchased and implemented if one exists that meets the needs already.   | The barriers for creating new cloud-based services are coming down. A start-up can spot a market opportunity and rapidly develop a solution with little of the traditional investment. As the solution is based on a common set of technologies, it should be able to plug into existing cloud services facilitating implementation and market acceptance. |

## Making the Right Choice

In truth, cloud computing is an umbrella term that only becomes meaningful when broken into its three major parts: Software as a Service (SaaS), Infrastructure as a Service (IaaS) and Platform as a Service (PaaS). There is overlap between the three areas but a simple definition of each would be:

**Software as a Service**—The most established of the cloud models, SaaS describes applications that are designed for end-users and delivered over the web by service providers.

**Infrastructure as a Service**—IaaS offers the entire system—including server, storage, networks and operating system—to end-users.

**Platform as a Service**—PaaS is a set of tools and services designed to make the coding and deployment of SaaS applications available over the web.

The power of SaaS was quickly spotted within the areas of Salesforce Automation and Customer Relationship Management. If the organisation had areas where it was dealing with data external to the organisation, SaaS offered a means to better manage and utilise that information. The potential of PaaS is still to be realised as cultural resistance

against moving from the traditional IT model remains. Yet, more and more organisations are using PaaS solutions to facilitate their development and testing efforts without the investment needed to ramp up internal resources.

However, the sweet spot for many organisations today is IaaS. It comes with many cost benefits. It virtually removes capital expenditure and makes operational expenditure much more predictable and controllable. It allows organisations to reduce their overhead in with internal IT resources while increasing the levels of service they can provide to business users.

But cost is a short-term justification. In the end, the organisation must derive deeper value from its strategic decision to move to a cloud-based service approach. If we accept that almost all organisations will embrace some form of cloud computing, but no organisation of any size is likely to replace all its internal systems, then the key to success lies in which systems they select.

Cloud computing is ideal for niche or discrete business systems. From a technology perspective, IaaS provides maximum rewards where it is used to address and improve an end-to-end business process. In addition, IaaS is also extremely powerful when it comes to inter- and intra-organisational connectivity. The Internet was designed

to facilitate the exchange of data on networks outside the organisation so it should be no surprise that this is still its strength. The difference now is that the cloud offers infinite scalability allied to the affordability, security and performance that were previously missing.

## About GXS

GXS is a leading global provider of B2B e-commerce solutions that simplify and enhance business process integration and collaboration among trading partners. Organisations worldwide, including more than 75 percent of the Fortune 500, leverage the on-demand services on GXS Trading Grid® to extend supply chain networks, optimise product launches, automate warehouse receiving, manage electronic payments and gain supply chain visibility. GXS Managed Services, GXS' B2B outsourcing solution, empowers customers with the expertise, technical infrastructure and program support to conduct B2B e-commerce with trading partners globally.

Based in Gaithersburg, Md., GXS has an extensive global network and has local offices in the Americas, Europe and Asia-Pacific regions. GXS can be found on the Web at [www.gxs.co.uk](http://www.gxs.co.uk).



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