Whitepaper

The cloud: everything to everyone, or too good to be true?

As we increasingly see technologies redefined with the suffix “as a service” are we entering a time of “everything as a service”? How will the future of the cloud change the way we work, bring new benefits to market and improve customer service? How can the cloud re-invent organisations?

IT decision-makers are already looking to the cloud to support new IT delivery models such as software-as-a-service (SaaS), platform-as-a-service (PaaS) and infrastructure-as-a-service (IaaS). And some experts argue many firms are moving towards an “everything-as-a-service” (EaaS) model using the cloud.

More and more traditional IT applications are being made available through the cloud, such as:

- Cloud data storage with data-retention IT consulting services that deliver a flexible solution for managing and retrieving data over the internet on a pay-as-you-go basis
- Cloud-based, on-demand identity and access management services that make it easier and more cost-effective for enterprise clients to securely extend and manage user access to cloud-based resources, while maintaining control over policies and governance
- Security-as-a-service to give companies the ability to quickly and easily add robust security services and avoid purchasing expensive equipment. Such services enable customers to quickly and easily secure new locations with the latest security technology
- Enterprise mobility-as-a-service which allows on-the-go workers to quickly and securely access their corporate networks, while making it easier for IT managers to manage a global mobile workforce.

Cloud and the role of IT

Analyst Gartner sees the cloud playing a central role in the future development of IT organisations and their role within businesses. In its recently published Top Predictions for IT Organisations and Users for 2011 and Beyond report, Gartner says a clear linkage of IT investments and business results will become “an imperative” for IT organisations.

"With costs still under pressure, growth opportunities limited and the tolerance to risk low, IT faces increased levels of scrutiny from stakeholders both internal and external," said Gartner analyst Darryl Plummer. "As organisations plan for the years ahead, our predictions focus on the impact this scrutiny will have on outcomes, operations, users and reporting. All parties expect greater transparency, and meeting this demand will require that IT become more tightly coupled to the levers of business control."

Gartner said last year’s themes of rebalancing supply, consumer demand and regulation are still present, but the view has shifted further toward external effects, and the cloud plays an important part here. The analyst says that by 2015, tools and automation will eliminate 25% of labour hours associated with IT services. Cloud computing, says Gartner, will hasten the use of tools and automation as firms move towards self-service, automated provisioning and metering, for instance, to deliver services.

Forrester Research analyst James Staten says the cloud is something that firms should not worry about. It is something they should just get on with as its business adoption is inevitable, despite a number of expected business cloud failures. Staten predicts that many cloud deployments will fail, but he says this experience should be put to good use. He says, "This is a good thing, because through this failure you will learn what it really takes to operate a cloud environment. "Knowing this, your strategy should be to fail fast and fail quietly. Don’t take on highly visible or wildly ambitious cloud efforts. Start small, learn, and then expand."

The potential of the cloud has also not been missed by government, particularly in the face of the economic downturn and in response to public sector cutbacks. The UK government has decided to back cloud computing, saying the technology offers “real economic benefits” for business and the public. Communications minister Ed Vaizey
recently said cloud computing could drastically reduce costs for new companies and expand mobile capabilities. “Access to the networked resources provided by clouds enables companies to enter markets without having to meet the capital costs of building their own computer infrastructure,” Vaizey said. He also said the cloud would play a major role in addressing the explosion in the number of portable devices with limited storage capacity being launched onto the market and being adopted by business.

“Access to clouds enables organisations to transcend that storage limitation and provide a level of functionality which would normally be associated with much larger machines,” he said. But Vaizey warned cloud providers that consumers and governments need to co-operate to ensure that issues such as individual privacy and data security are fully addressed, “Cloud computing is a good illustration of the need for international co-operation to ensure the very important developments on the internet are taken forward.”

The UK government is already involved in the development of its G-Cloud initiative, which will see all government departments step up their drive to share server, network and internet resources via the cloud in an attempt to cut costs in hardware, software, bandwidth and data storage. Local government is not being left behind either. Councils are being encouraged to move more widely share network and communications resources to save cash and the cloud is coming into play. Recently, the London boroughs of Merton, Kingston-upon-Thames and Sutton announced they intended to move their IT infrastructure to a “community cloud” model in the next 12 months, sharing common resources and citizen data via a secure hub located in the cloud.

Andrew Miller, head of information security in government at consultant PricewaterhouseCoopers (PwC), said, “Vaizey’s comments about the security and privacy challenges facing cloud computing are particularly apt. While providers have been quick to articulate the commercial proposition to attract customers, the security models to protect customer information within the cloud architecture are currently lagging behind. “Hopefully this message from government will spur providers to embed security within the cloud architecture rather than attempt to bolt it on later.”

Cloud standards
The cloud industry is taking standards and security seriously. The Cloud Industry Forum (CIF), made up of cloud providers and other related technology suppliers, recently launched a code of practice for the delivery of cloud services. The aim of the code is to standardise and certify companies offering cloud computing services. The draft code, drawn up by more than 200 organisations, covers a wide range of issues, including security, operational issues, delivery, financial viability of suppliers, governance and technology standards and interoperability.

CIF chairman Andy Burton said, “We firmly believe that the market needs a credible and certifiable code of practice that provides transparency of cloud services, so that consumers can have clarity and confidence in their choice of provider. The market now has that benchmark.”

CIF member Phil Haylor added, “Cloud-based computing is growing at a phenomenal rate and so this sector needs control mechanisms. By laying down the code of practice, the CIF has established a credible gauge for customers to assess a vendor’s capability to deliver a robust and secure high quality cloud service. With this clarity of information in place the industry can move forward and be judged on its ability to deliver.”

Tesco in the cloud
As well as standards, the cloud also needs big commercial hitters to back it, and they don’t come any bigger than Tesco, the UK’s largest retailer. Tesco has adopted cloud web technology to support its popular Tesco Clubcard voucher campaign, which allows customers to double the value of their earned discount vouchers by registering on the main Tesco website.

Tesco uses website accelerator services hosted in the cloud by a third party to cope with this promotion, which takes pressure off Tesco’s already busy server farm. Tesco adopted this technology after “discovering that ISP’s couldn’t support the kind of bandwidth Tesco demanded”. Ed Camp, head of server and storage at Tesco.com, said, “We knew it would be straightforward to plug the cloud services into our website to take the load from our infrastructure and provide the support we needed, no matter how much traffic visited our website.”

So with central and local government backing for the cloud in place, the support of big commercial operations, and emerging standards coming to the fore, perhaps the cloud really is becoming “everything to everybody”.

Verizon says...

Even as recently as a couple of years ago, the prospect of IP networks evolving from grids of closed networks to open, cloud-enabled ecosystems was something novel: it’s now something of a norm.

End-user demands for cloud services have made ultra-high capacity and increased performance in networks a total necessity as a new Everything-as-a-Service (EaaS) delivery model emerges.

EaaS will vastly change traditional operating model dynamics. New approaches and deliveries will alter the composition of typical business passages by enabling simpler more direct exchanges in some markets, re-intermediation in others. Furthermore, EaaS places the customer experience centre stage; yet this may present challenges as well as opportunities, in particular as regards competitive advantages.

There are few inevitabilities in business but it’s fairly safe to assume that virtually everything will be delivered as a service: from computing power to business processes to personal interactions. And with when highly available, resilient and secure EaaS infrastructures are in place, the cloud can then indeed become “everything to everybody”, enhancing your business performance, increasing your business agility and improving your business outcomes.