

Whitepaper



# Cloud Computing

The facts minus the hype



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It's no accident that the current global economic downturn has coincided with a revolution in cloud computing. More than ever, businesses are trying to reduce internal IT expenditure, consolidate their IT activities and run a much leaner operation.

An ever changing business environment has seen a rapid acceleration in the world of cloud computing. Understandably, much has been written about this relatively new advance at the business end of IT servicing. But once the hype and myth has been separated from fact, it's easy to see why cloud computing is fast proving the logical choice for many companies.

## The move towards cloud computing

It's fair to say that the days of a totally self-managed IT system are gone. The “do-it-yourself” mentality has in many cases shown to be both costly and ineffective. This evolution in the way IT technology is delivered to business is probably the biggest paradigm shift the industry has encountered.

From the monolithic, cumbersome mainframes of the 1980's to a semi-hosted, complicated platform in the late 1990's and early 2000's, and finally now to the option of having a completely outsourced, streamlined IT operation.

Cloud computing has emerged as a natural by-product of this outsourcing trend. Leveraged via the power and speed of the internet, as well as virtualisation technology, cloud computing has the potential to deliver a complete range of IT services.

## What is cloud computing?

Before examining the case for cloud computing, it's important to understand exactly what it is and isn't. Cloud computing effectively places the responsibility for the provision and maintenance of your IT systems into someone else's hands. In this

sense it's a fully outsourced IT solution operated through the power of the internet and virtualisation technology to deliver services, applications and store information.

Cloud computing groups large numbers of computer servers and other infrastructure resources together, offering combined capacity on an on-demand, pay-per-use basis. It's fully enabled by virtualisation technology, with users often having little to no physical infrastructure, such as server-racks and network devices, on their premises.

The 'cloud' is basically a metaphor for the internet itself and the way web services are depicted as sitting inside a cloud or bubble. Users themselves sit outside the cloud and harness its power only when they need it.

Not surprisingly, cloud computing has been regularly compared with the way a utility company, such as electricity or gas, provides energy to customers. While this analogy is not entirely accurate, it's true that customers do utilise the centralised "power" of a large provider through a multi-tenancy operation. Also, customers can easily upscale without having to invest heavily in infrastructure, such as servers and network devices.

## What's inside the cloud?

Cloud computing can deliver a diverse range of IT solutions. But areas that are experiencing a particularly strong uptake are: Infrastructure-as-a-Service (IaaS), Software-as-a-Service (SaaS) and Backup and Recovery-as-a-service (BURAaaS). These services do overlap in some areas, but it's important to distinguish what their main offerings are for business.

IaaS is the delivery of a total IT infrastructure as a service, most often through the power of a virtualisation platform over the internet. Rather than purchasing servers, data centre space and network equipment, a business will utilise these services as a fully outsourced model.

Similar to IaaS, SaaS allow for the delivery of services, in this case software, from a central location, again usually over the internet. With its low-cost, subscription-based pricing model, SaaS is a compelling way for any sized company to attain the specific software and applications they need, without large upfront licencing fees.

It's not simply on software purchases that SaaS can save businesses money. Like other cloud computing services, businesses do not need to make unnecessary investments in IT support to manage and maintain IT platforms in house, which can put a strain on capital outlay and business productivity.

The safe storage of data is at the core of every business. BURAAaaS provides the effective management, backup and storage of data as a fully outsourced service with minimal upfront expenditure. BURAAaaS generally improves service levels with faster back-ups, restores, search and retrievals of data, reducing or eliminating the need for old-world media such as tape, which is costly and unreliable.

Improved efficiency in disaster recovery time is another positive to an outsourced platform via BURAAaaS. Rather than waiting days to have information restored and losing valuable access to important business data, a cloud computing solution is able to respond immediately. The recovery is often completed in a few hours, with little disruption to a company's operations.

## Cloud computing: the case speaks for itself

It's true of every business that any new investment in IT will need to be justified to top-level management. But as we'll see, with cloud computing services such as IaaS, SaaS and BURAAaaS there is a range of benefits to businesses wanting to maximise their IT efficiency while minimising expenditure.

Let's take IaaS as an example and compare it with a totally self-managed IT platform. Firstly, here's what a traditional cost and maintenance structure of an on-site IT operation can look like:

- Technical resources – expensive hiring of experts to maintain and monitor infrastructure
- Hardware purchase costs – constant need to purchase and upgrade
- Data centre charges – power and connectivity costs, as well as hosting hardware
- Capital Expenditure (CAPEX) – Continued pressure on and justification for expenditures

- Management dilemma – overall monitoring and maintenance, time spent preparing for peak “bursts”
- Carbon footprint – cooling and running of IT systems increases emissions

These elements change dramatically when a move is made to a fully outsourced or off-site IaaS solution – especially in terms of cost-savings. The typical approach is CAPEX heavy. To satisfy future capacity needs both software and equipment set-ups need constant evaluation and upgrading. This aspect can often negatively affect daily operations, which has a run-on in terms of productivity and ultimately, the bottom line.

On the other hand, IaaS reduces the constant need to justify capital outlay and secure budgeting for things like server upgrades, new software applications or new networks. With monthly payments businesses can benefit from minimal upfront costs and a pay-per-use model.

IaaS allows computing infrastructure to truly scale with business need. It removes the three m's involved in keeping an internal infrastructure at its optimal performance – monitoring, maintenance and management. There's also minimal or no capital required because services are based on a monthly subscription fee according to demand. IaaS consistently offers users improved visibility, control and security compared to an internal IT operation.

In addition, IaaS truly is an on-demand service, with a reduced timeframe to deploy new servers and applications, as well as the access to highly skilled and knowledgeable staff. It also avoids IT outages by having additional capacity on-hand for peak usage events, sometimes called “spikes” or “bursts”. Just as importantly for some companies, their carbon footprint will be drastically reduced as energy consumption falls.

### IaaS at work: cost savings

Thousands of companies have already benefited from flexible and scalable IaaS solutions. One example, an Australian-wide retailer, was previously running an ageing server and application infrastructure that was costly and delivered poor

performance. It was in the market for an upgrade, and rather than an extensive and costly overhaul it settled on an IaaS package from Brennan.

Over three years it reduced its total IT costs from \$800,528 (\$413,000 in up-front capital costs, as well as \$86,000 a year in personnel costs and \$43,200 in rack-space and power expenses) to \$440,640 (\$43,655 integration cost and \$11,027 per month in running costs). This is a saving of nearly \$360,000 or 45 percent.

Brennan believes IaaS has a real future as the logical choice for mid-market companies searching for workable, reliable infrastructure that responds to their changing needs. In terms of cloud computing, IaaS is continually showing users its agility, reliability, scalability and capacity to deliver large cost savings.

## Overcoming concerns: security and migration

Cloud computing involves a multi-tenancy format – where users are sharing the power of resources across a centralised framework (the web) – so security is a natural concern. However, cloud computing has been able to prove its superiority in terms of security compared with traditional methods.

This is due to the centralisation of data and the ability of vendors to devote increased resources to targeting security issues. These problems can be solved quickly and easily, while many other companies can't afford the time or money to do the same. It's vital when selecting a cloud computing provider that companies get access to skilled IT technicians when needs arise, as well as responsiveness in getting a fast turn-around time.

The choice of provider is especially important when it comes to accessing SaaS. Without the correct advice and assistance, many businesses end up with a wild array of applications that are poorly integrated with their existing IT platform. A software offering should always be tailored to a customer's specific requirements and compliment pre-existing applications.

Another common concern for businesses is the migration phase from a self-operating IT platform to a totally-outsourced solution. This can be the most critical stage when

moving to an IaaS structure. Again, it's important to have a detailed and commonsense plan with your provider that doesn't impact on the actual running of the business.

When choosing a provider for cloud computing services, it's important that you look for a vendor that has proven experience in the provision of the chosen service, flexibility to tailor the requirements to your business needs and can provide the ongoing support and expert advice as and when required.

## Cloud computing: the smarter choice

Cloud computing is fast becoming the simplest, most effective solution to business IT needs. In its ultimate form, cloud computing will dramatically reduce business expenditure across the board, while delivering a more streamlined and advanced IT solution. Brennan is already witnessing how cloud computing's potential is realised with the clients who benefit from it.

The case for adopting a totally outsourced IT operation is becoming more compelling everyday. Cloud computing has a very low lead-time, allowing users to make decisions based on what they need now rather than having to wait for upgrades or budgetary approval. This has continually shown to significantly reduce IT expenditure and lead to smoother business operations.

The business end of IT solutions is undoubtedly an exciting frontier, and cloud computing has capitalised on important advances in both web services and virtualisation technology. Analysts from Gartner expect that by the end of 2012 around 80% of the world's largest businesses will utilise some aspect of cloud computing for their IT needs.

Inevitably there will be a tipping-point for the total managed outsourcing of IT services. Reaching critical mass will see businesses, regardless of size; replace their in-house assets with services consumed from the cloud. For the many companies already benefiting from a managed cloud computing solution the only way is up.

For more information on cloud computing and how your business can benefit, contact Brennan on 1300 500 500 or visit [www.brennanit.com.au](http://www.brennanit.com.au)