Cloud Computing

Tribeca
TECHNOLOGY GROUP

Cloud Computing – What is it?

Over the course of the last decade, Cloud Computing has become a buzz word within the IT Industry with organisations seeking to become 'cloud based'. In this document we will establish what the terms mean, the benefits and problems of cloud-based services, and offer impartial advice on what solutions should be used.

Cloud computing is the delivery of computing as a service, rather than a product. This can be done at many levels, whether it be the delivery of a specific application, data storage or an entire desktop. However; whatever the service, the goal is always the same – for it to be available from wherever the end user is geographically located.

There are several different models of cloud computing, the meanings of which have been summarised below:

Public Cloud

Often seen as the traditional or main stream definition of cloud computing. This would be the provision of services by a third-party provider e.g. Google, offering its Gmail service, or an online storage provider, such as Dropbox.

'The cloud infrastructure is made available to the general public, or a large industry group, and is owned by an organisation selling cloud services'[1]

Private Cloud

This term relates to when the infrastructure is operated solely for the use of one company or organisation. An example of this would be an infrastructure hosted in a Data Centre with resilient connectivity. The use of this term has been widely criticised, as this type of cloud does not have the benefits that some believe are key to cloud computing.

'The cloud infrastructure is operated solely for an organisation. It may be managed by the organisation or a third party and may exist on premise or off premise'[2].

Community Cloud

A shared resource between several organisations within a specific industry. Generally, will be smaller than a public cloud, however; the cost of creating and supporting the infrastructure is split across organisations.

'The cloud infrastructure is shared by several organisations and supports a specific community that has shared concerns (e.g. Mission, Security requirements, policy and compliance considerations). It may be managed by the organisations, or a third party, and may exist on-premise or off-premise'[3].

Hybrid Cloud

A hybrid cloud is a combination of one more other cloud types.
'The cloud infrastructure is a composition of two or more clouds (private, community or public) that remain unique entities but are bound together by standardized or proprietary technology that enables data and application portability (e.g., cloud bursting for load balancing between clouds)'[4].

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[1] 'The NIST Definition of Cloud Computing (Draft)' National Institute of Science and Technology, July 2011
[2] 'The NIST Definition of Cloud Computing (Draft)' National Institute of Science and Technology, July 2011
[3] 'The NSIT Definition of Cloud Computing (Draft)' National Institute of Science and Technology, July 2011
[4] 'The NSIT Definition of Cloud Computing (Draft)' National Institute of Science and Technology, July 2011

Benefits of Cloud Computing

The 3 main benefits of working in a cloud computer environment are detailed below:

1) Reduced Capital Expenditure

As the computing power is delivered as a service, cloud computing is paid incrementally reducing the capital expenditure for organisations wanting to provision services such as email or file storage. This is not the case when working in a 'Private Cloud' environment and is one of the key reasons why some IT professionals object to the term.

2) Scalability

You can scale your business computing and storage needs almost seamlessly – without the need to purchase additional hardware.

3) Remote Access

As the service exists 'in the cloud' it can be accessed from anywhere with an internet connection no matter what that service may be.

Problems with Cloud Computing

There are problems and risks associated with moving data or services into a public, community or hybrid cloud. Some of those problems are detailed below:

Security

Just how secure is your data? Not a week passes without a story breaking in terms of data being stolen, or user account details being leaked from a major provider. Google, Sony and Microsoft have all suffered major data loss over recent times. Hackers tend to target large companies, fuelled either by financial, ethical or political motives, meaning that by moving your data to one of these providers, it is inherently at more risk.

Control

Once your data has been uploaded to a public cloud based service, you lose control of it. What happens when you click delete? As the data is stored on another company's server, is the data removed, or simply moved to another location on the same server?

Where is your data?

Once your data is 'in the cloud' you have no way of knowing where it is physically located. Since the introduction of the Patriot Act in the USA, any data that is contained on hard disks within a server located in the USA, can be interrogated by the US government. Furthermore, the service provider is prevented from telling you, the end user. If this data was on a server in your office that you own, and the government wanted access to it, they would have to inform you.

Availability/Support

Although one of the key benefits to Cloud Computing is the availability of your infrastructure – when operating in a public cloud, if there's a problem, you'll be one in a very long line of customers at the end of a telephone queue. Again, there's a lot of evidence available of Gmail accounts being disabled for weeks on end for no apparent reason, causing interruptions in mail flow, and without any reasonable explanation.

Support SLAs with public cloud providers can be very expensive if you want to maintain a fast response time. This makes this type of support arrangement prohibitive for all but large companies.

Our Advice

Tribeca has created numerous private and hybrid cloud environments for our client base and would wholeheartedly recommend this as an environment for your core infrastructure.

Some workloads may well be better suited to a public cloud service, such as AWS or Azure. In this instance, the provision of those services and deployment of data protection tools is vital to ensure your data is secure, recoverable and that a robust DR solution is in place.

Tribeca has clients working in both private, hybrid and public clouds, and can assist you with deploying services to either platform.

About Tribeca

For more than 10 years, Tribeca has delivered world-class, specialist IT services to the sometimes-unforgiving investment management sector. Our services include Business IT Support, Cyber Security, Disaster Recovery, Network Design, Data Centre Hosting and Software Development.

We now support a wide variety of clients across 15 countries and monitor their infrastructures 24/7 with over 11,000 monitor sensors connected. Our team is trained to keep up with your business's fast pace of work and appreciates your constant need for robust, reliable and responsive IT support. We'll ensure that your systems are working to their optimum level, enabling you to do your job as effectively as possible. We use only the latest high-performance technology to guarantee that you receive the best possible service. Our instant response service desk can resolve over 90% of our clients' issues remotely. This is because our first line engineers are trained to a standard so high that it surpasses industry expectations for this level. This efficiency benefits you hugely, because our team will always work hard to fix your technical issues promptly to minimise any inconvenience to you and your network.

Tribeca is committed to delivering the best outsourced IT support service within the financial sector. We guarantee to reduce your IT overheads, including third-party providers. As part of our dedicated service, we can assure you that you will always deal with a full-time employee, as we never use calls centres or contractors.

For further information, visit www.tribeca-it.com, email us on info@tribeca-it.com or call us on 08000 122 225