THE EVOLUTION OF CLOUD ADOPTION IN AUSTRALIA

By Melbourne IT Enterprise Services
THE EVOLUTION
OF CLOUD

According to the United States Department of Commerce Computer Security Division, cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Further, the department defines five essential characteristics of cloud models:

ON-DEMAND SELF-SERVICE.
A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.

BROAD NETWORK ACCESS.
Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations).

RESOURCE POOLING.
The provider’s computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. There is a sense of location independence in that the customer generally has no control or knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction (e.g., country, state, or data centre). Examples of resources include storage, processing, memory, and network bandwidth.

RAPID ELASTICITY.
Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time.

MEASURED SERVICE.
Cloud systems automatically control and optimise resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth, and active user accounts). Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilised service.
THREE SERVICE MODELS

1. SOFTWARE AS A SERVICE (SAAS)

The capability provided to the consumer is to use the provider’s applications running on a cloud infrastructure. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.

“As SaaS solutions become commonplace in several industries, the market has felt the effects. IDC research shows that SaaS technologies are projected to constitute a quarter of all new enterprise software purchases by 2016, while PWC estimates that SaaS delivery will make up approximately 14.2 percent of all software spending. Overall, the entire SaaS market is projected to expand at a compound annual growth rate of 21.3 percent over the next two years.”ii

“Most business and IT executives are well aware of the benefits of moving their IT workloads to the cloud: faster time to market, more flexible and scalable systems, streamlined application development and reduced data-center costs. Few, however, are using the cloud to its full potential.” A recent study by Bain & Company identified that “firms that are serious about getting cost savings and other benefits aim to migrate at least half of their workloads to the cloud. By comparison, companies deliver an average of only 18% of their workloads from the cloud today, though adoption rates vary by industry.”iii

2. PLATFORM AS A SERVICE (PAAS)

The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

“Companies are continuing to adopt PaaS due to the advantages the cloud model offers, advantages like decreased IT costs and increasing performance of application development. Gartner has predicted that PaaS will have an extensive part to play from 2014 and by 2016 every organisation will be running part of their software on either public or private PaaS, some will even utilise this platform completely.”

“PaaS is helping to pave the way to organisations adopting governance best practices. It allows for simplified user experience to complex development tools, processes and delivery. Through incorporating software best practices, test automation, integration and fault tracking, governance is improved, leading to better quality software being developed.”

“If Gartner’s trends are anything to stand by then perhaps choosing not to adopt PaaS will be holding you back in the evolving age of development technology and hindering your innovation and long term success.”iv
3. INFRASTRUCTURE AS A SERVICE (IAAS)

The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software; which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).

Gartner predicts that Infrastructure-as-a-Service (IaaS) will achieve a compound annual growth rate (CAGR) of 41.3% through 2016, the fastest growing area of public cloud computing the research firm tracks. The following graphic provides insights into relative market size by each public cloud services market segment:

Public Cloud Services Market by Segment, 2010-2016

Melbourne IT has been at the forefront of the cloud services market in Australia having successfully transitioned from a hosting provider to a managed cloud services business.

Melbourne IT has partnerships with both Amazon Web Services (AWS) and Microsoft and has been providing managed cloud services on public cloud infrastructure since AWS launched in Australia in November 2012. Melbourne IT is an AWS Premier Consulting Partner; Authorized Government Partner; Managed Services Provider and is a Microsoft Gold Partner.

“According to our analysis, companies are moving more big data and analytics applications to AWS. This is based on an almost 50% increase in the number of medium EC2 instances used in Q1, which increased to 29% from 19% in Q4.”

“Until recently, IT executives were reluctant to adopt public clouds run by Amazon, Microsoft and Google. But the double-digit growth of public clouds suggests customers are becoming more comfortable with these solutions as vendors improve security, availability and flexibility, and as subscription fees continue to fall.”

While a number of Australian businesses have been using public cloud infrastructure for some years, widespread adoption of cloud services commenced in Australia when AWS launched their local cloud data centres in November 2012 and guaranteed Australian organisations that a copy of their data would always remain in Australia. In the six months directly after AWS opened their Sydney data centre, it claimed to have 14,000 Australian customers using the AWS service – up 4,000 on the pre-Sydney rollout.

“Companies that want to lead should adopt a cloud-first approach for new workloads. Cloud providers like AWS and Microsoft offer training to help IT staff think along these lines, and it helps to hire staff experienced with cloud solutions to educate others on their teams.”

The consensus among industry analysts is that cloud adoption is growing strongly at a Compound Annual Growth Rate of 23-24%. Melbourne IT’s own managed services cloud growth is consistent with the industry forecasts.

Melbourne IT sees three clear waves of cloud adoption in Australia with Australian businesses now moving into the second wave of cloud adoption. Each wave is bigger than the preceding wave.
The first wave of cloud adoption in Australia has been driven by organisations seeking to unlock agility in their organisations and drive increased rates of innovation.

Based on Melbourne IT’s experience, the most common workloads deployed into the cloud are test and development, web and digital applications and analytics. Developers inside organisations are using the flexibility of the cloud both in terms of resource availability and cost to more rapidly test and deploy code for internal projects.

It is logical to deploy these platforms in the cloud in order to access the benefits of reach and on demand resourcing to speed innovation rates and compete against others.

Digital marketing investments support data driven decision making if stakeholder data is analysed and business intelligence captured. As a corollary to increased investments in web and digital platforms, organisations are also investing in analytics platforms in order to understand their markets better and to drive more targeted, accurate and efficient decision making.

“Australian organisations will spend $670.6 million on Business Intelligence and Analytics software this year alone – an increase of 12.1% on last year - as worldwide sales of the software are predicted to exceed US$16 billion for the year.”

“The latest global sales figures for BI and analytics from analyst firm Gartner also reveal that in New Zealand, spending on BI analytics will grow 9.3% this year to reach NZ$94.2 million.”

This first wave of cloud adoption will continue into the future.
The success of web and digital deployments under the first wave of cloud adoption has enabled organisations to understand cloud services and the benefits of agility and innovation that cloud services unlock.

By its very nature, trading online, building brand equity, interacting with customers, suppliers and other stakeholders is very high profile. These services and interactions often go to the very heart of an organisation’s purpose and being. Success in delivering web and digital applications therefore builds trust very quickly in the cloud and associated cloud services.

Competitive pressures on organisations to innovate faster, know their customers better and be more efficient in their transitions and relationships has driven the requirement for DevOps skillset when developing and deploying applications. DevOps is combining development and operations skills together so that new applications are written to automatically scale or contract in real time depending on load or demand. This method properly implemented delivers the best user experience in the most cost effective manner and has matured as a competency through the first wave of cloud deployments.

"As the cloud matures, new approaches are emerging that have the potential to meet the demands of mission-critical apps. It’s only a matter of time before private clouds extend their reach to virtually every business application, so the potential advantages in cost, efficiency, and agility are just too great to ignore." 

Mobility and Bring Your Own Device (BYOD) are further drivers for deploying more flexible, more innovative applications and services in the future.

According to recent reports from Verizon, Forrester and Infosys, more than 80% of organisations surveyed are either using or plan to use critical applications in the cloud.

The second wave of cloud adoption therefore is organisations migrating existing applications into the cloud for the benefits of cost savings, speed and innovation and to position applications into an environment ready for re-factoring, or re-development to take advantage of DevOps capabilities and the elastic nature of the cloud to deliver the best possible performance, more rapidly and at the best price.

Melbourne IT expects that data centre migrations into the cloud will increase dramatically over the next 2-3 years.

Melbourne IT expects that data centre migrations into the cloud will increase dramatically over the next 2-3 years.

"An overwhelming majority of companies are using S3 Storage (97%), EC2 (82%) and SNS messaging (70%). Close behind was SQS message queuing service (61.4%, up from 46% in Q4, ’14) and RDS relational database (46.9%). As for databases, the second most used database service was the EC2 SQL Server standard (16%)."

The ability to therefore standardise and automate the method of migrating existing workloads into the cloud is critical in order to manage the volume of workloads expected to move in to the cloud. The partnership between Melbourne IT and 2nd Watch to deliver Cloud Factory as a repeatable, automated, fixed price method to migrate existing corporate applications to the cloud is one such example of these services already being available in the Australian market to meet the forecast demand.
The third wave of cloud adoption has in fact already commenced. The third wave of cloud adoption is the widespread use of true native SaaS applications. Many organisations use SaaS solutions today such as salesforce.com or Office 365 but often on a stand-alone basis or with little integration to existing applications and data.

As an increasing number of true SaaS applications become available, organisations will procure these services natively over the cloud. In the limit most applications will be consumed in the cloud.

“Smaller IT markets such as that in Australia and New Zealand are contributing to a global technology industry that continues to grow by the year. A new TechNavio report suggested the ANZ IT marketplace will increase at a compound annual growth rate of roughly 5.1 percent between 2015 and 2019, with cloud computing contributing to this CAGR.”

The challenge for organisations in managing the third wave of cloud adoption is how to coherently bring multiple SaaS applications together into a coherent framework to be integrated across other platforms, consumed in a standard wave and billed, provisioned and supported in a manageable way.

These corporate frameworks to support true SaaS delivery on a widespread basis are nascent at best today. Cloud service providers such as Melbourne IT have invested in architectures, systems and automation to manage in this environment but this market is still in the early adopter phase.

CONCLUSION

The adoption of cloud services in Australia is growing rapidly with Compound Annual Growth rates of 23-24 percent. Web and digital applications, test and development and analytics have been the primary drivers for the first phase of cloud adoption in Australia.

While this first wave will still continue, a second, larger wave is imminent driven by organisations migrating existing applications to the cloud to take advantage of the benefits of innovation, agility and efficiency successfully demonstrated through the success of the first wave of cloud adoption.

Given the size and scale of the second wave of cloud adoption, standardised, automated and fixed prices methods of data migration are required to successful complete migrations.

“The cloud has changed the fundamental nature of computing and how business gets done and it will continue to do so through 2020. In fact, IDC predicts that by 2020 clouds will stop being referred to as “public” and “private” and ultimately they will stop being called clouds altogether. It is simply the new way business is done and IT is provisioned.”

A third wave of cloud adoption, true SaaS applications, is being deployed today mainly as point solutions inside organisations. While this third wave will ultimately be the largest wave, constraining factors today such as the widespread availability of true SaaS applications and the lack of enterprise SaaS management frameworks mean that this third wave of cloud adoption will not be mainstream for some years to come.
SOURCES

i. United States Department of Commerce Computer Security Division Information Technology Laboratory, National Institute of Standards and Technology Gaithersburg, MD 20899-8930. September 2011


vii. 2nd Watch AWS Scorecard Q1, 2015


xiii. 2nd Watch AWS Scorecard Q1, 2015


xv. IDC Cloud Research

ABOUT MELBOURNE IT

Melbourne IT Enterprise Services designs, builds and manages cloud solutions for Australia’s leading enterprises. Its expert staff help solve business challenges and build cultures that enable organisations to use technology investments efficiently and improve long-term value. With more than 15 years’ experience in delivering managed outcomes to Australian enterprises, Melbourne IT has been long associated with enabling success. Its certified cloud, consulting, and security experts repeatedly deliver results. This is why many of the brands you already know and trust, rely on Melbourne IT.

THE RIGHT SOLUTION IS MELBOURNE IT

melbourneitenterprise.com.au
1800 664 222    corporate.sales@melbourneit.com.au