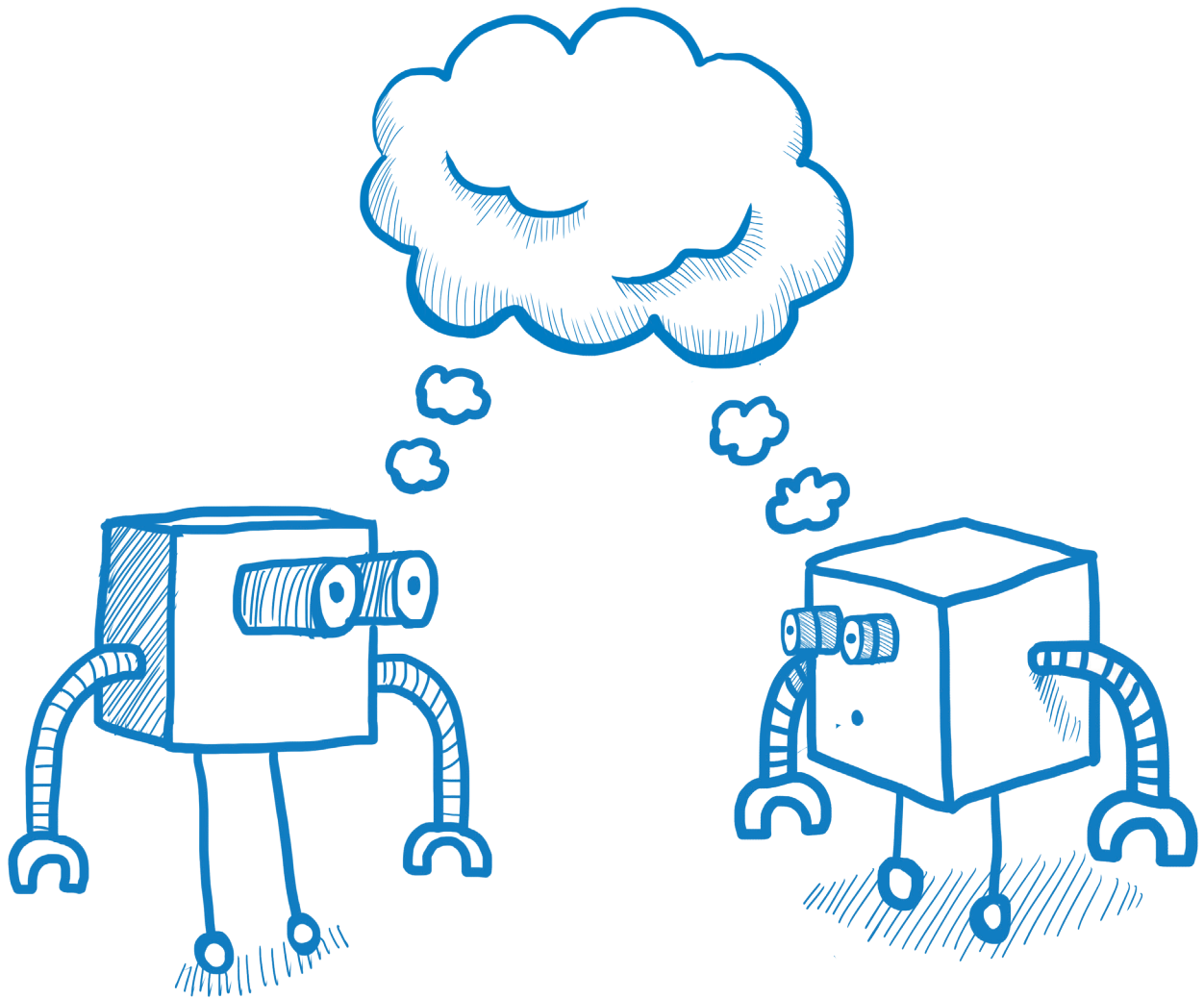


# Public vs Private Cloud: Food for Thought



**Cloud computing is quickly becoming the fast food of the IT industry. On the face of it, it's quick, cheap and easy to implement, but as organisations contemplate a move to this much-hyped service delivery method, there are a number of questions they should ask to avoid being left with a bad taste in their mouth.**

With more than 2 million organisations now using Google's Apps cloud worldwide, and a predicted \$7 billion investment in cloud-based services in Australia by 2014, 'The cloud' is growing. In fact, CIOs and IT decision makers who resist this technological evolution now risk not only being labelled sceptics, or old school, but outdated and irrelevant.

The problem facing many decision makers is not if to make the switch but how. This job isn't made any easier by a market flooded with offerings.

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## Clarifying the Cloud

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**"The first question a CIO or IT decision maker needs to ask is 'which method of deployment is right for my organisation?' "**

Part of the problem is the term 'the cloud' itself. It is as clear as mud. Everyone says it, and we all have a general understanding of what it means, but the spectrum of services which loosely fall under this blanket terminology now range from consumer-grade webmail to sophisticated shared corporate services - and the list grows each day.

Choosing the right path or service is about asking the right questions. Each and every cloud solution will claim to deliver economies of scale via reduced infrastructure, maintenance and support.

Scalability and pay-as-you-go payment models also characterise archetypal cloud offerings. This is nothing new. The first question a CIO or IT decision maker needs to ask is 'which method of deployment is right for my organisation?'

According to the National Institute of Standards and Technology (NIST), there are four cloud deployment models - public, private, hybrid and community. The majority of businesses will only ever need to consider two - public or private.

## Defining public and private

**“When comparing public and private cloud computing, security is the elephant in the room, and it is something no organisation should overlook.”**

In simple terms a public cloud is characterised as being available to clients from a third party service provider via the internet. Gmail and Hotmail typify the public cloud. On the other hand, a private cloud-based service, data and processes are managed within the organisation, or hosted at a data centre, and not accessible via the internet.

The public cloud offers many things a private cloud can't. In the main, it is cheaper, quicker to deploy, and it has some of the largest and most trusted brands in the world flying its flag. NEC's Applications Net, Amazon's EC2 services, Google Apps and Microsoft's Azure are prominent players in this space. On the flip side, the public cloud brings with it risks not associated with on-premise or private cloud computing, including how to ensure the physical location and ownership of data, how to restrict and control access to sensitive data, how to ensure compliance, and how to manage recovery from significant IT failures.

When comparing public and private cloud computing, security is the elephant in the room, and it is something no organisation should overlook. In a recent survey, IDC asked IT executives whether they preferred using a private or a public cloud. Fifty-five per cent said they preferred the private cloud.

Any service delivered via the internet is exposed to the inherent risks of a public connection. This includes viruses and denial of service attacks. For many organisations, this is the sticking point that outweighs all other benefits, and why a private cloud solution often proves to be a more viable solution.

A private cloud can be deployed in a number of ways, but the end result should be the same – your network and everything on it is private and secured from observation and interference.

**“Any service delivered via the internet is exposed to the inherent risks of a public connection. This includes viruses and denial of service attacks.”**

The NEC private cloud consists of a three core components: a high-powered shared hardware infrastructure housed in our data centre, a dedicated private network provided by our broadband network Nextep, and a secure environment optimised and managed using best of breed virtualisation technologies.

Sharing is not something many organisations like to do, but in a private cloud, it is the only way to leverage economies of scale. It is the job of the provider to partition hardware and to create a security boundary around those partitions to ensure they do not bleed into each other. The end result is access to more high-powered hardware, faster processing and denser storage than most organisations could afford or manage on their own.



## Sizing up the solution

**“Every cloud solution should be treated as a commodity. It should be used only if it is cost effective and makes business sense.”**

A private cloud will not benefit every organisation. Large banks, government departments, and many other large enterprises, are big enough to run their own networks and high-grade IT Infrastructure. Their size also means they are able to adopt their own shared service business models for the delivery of IT to business units.

Conversely, the investment in high-grade IT Infrastructure (power, speed or storage) is often beyond a small business. Simply put, medium-to-large size businesses are the ideal candidates for a private cloud, enabling them to punch well above their weight without significant investment in on-site facilities, infrastructure or personnel.

## Key considerations

1. Treat any cloud solution as a commodity
2. Find out how you can get your information in and out
3. Ask for proof that it is safe, secure and accessible
4. Ask what happens if your performance or storage requirements change, and how quickly they can be changed
5. Ask where your information is stored and who owns the Intellectual Property
6. What service levels, are they using ITIL standards?
7. What's the impact if the data centre housing your data goes down
8. Is your business continuity plan able to cope with a data outage/disaster?

Public or private, the questions a CIO or IT decision maker considering a cloud solution should ask are the same.

Every cloud solution should be treated as a commodity. It should be used only if it is cost effective and makes business sense. If business needs change, organisations should ensure systems and services can be upgraded, downgraded or exited with minimum impact on operations, data and corporate assets.

Data is the most crucial consideration for any organisation looking to use 'The cloud'. Always ask a vendor where information is stored, how it can be accessed, and who owns it. Some providers will retain ownership over intellectual property. Anyone looking to implement a cloud-based email solution should consider this point carefully as some providers will mine emails for information. If having information onshore or offshore is important, then ensure the question is asked.

Flexibility is an attribute most cloud solutions and services possess, but if a business' processing or storage

requirements change, services need to be agile. Virtualisation technologies like VMware offer a means for this to be delivered instantly. If a provider can't do this, ask them why not.

Like any IT solution, ask a potential provider what service levels they offer. Are they following ITIL standards in their service delivery processes? If not, why not? Can you easily change supplier if they do not deliver? If so, how do you get your information out and to the next supplier? Most importantly, ensure your business continuity plan is able to cope with a potential outage, bankruptcy or disaster in your cloud supplier's delivery.

The public and private cloud boast many strengths and weaknesses, but the old adage still applies – you get what you pay for. The public market is saturated by consumer-grade applications with consumer-size price tags. At the other end of the scale, the private cloud is brimming with corporate-grade offerings at corporate prices. The key for any organisation is striking the right balance between price, security and flexibility.

NEC provides a comprehensive range of private and public-based cloud solutions and services, delivered via its Melbourne-based Data Centre and its new TIER 3+ data centre at Polaris in Queensland.

NEC is uniquely positioned to deliver private cloud solutions via its private broadband network Nextep. NEC's private cloud solutions are implemented by our professional services team who provide internationally recognised expertise in data centre management and VMware optimisation.

NEC delivers its public cloud solutions via Applications Net - which brings together a selection of leading brand ICT applications and communications services in one location delivered via the SaaS (Software as a Service) model.

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