

## INTRODUCTION

For several years, cloud technology has been one of the most talked about subjects in technology circles. By now, most small-to-medium sized organisations have heard that cloud computing is transforming the way their peers operate, and they've been inundated with talk of how the cloud enables small organisations to cut IT costs and operate more effectively.

But for many small companies, the cloud is a pretty (ahem) nebulous idea, and they have a pretty wispy notion of its potential value.

For example, 54% of organisations with less than 250 staff told Wakefield Research—a market research firm—that they've never used cloud technology. Of that figure, it was found that roughly 95% of them were already in the cloud and had been for years. They just didn't recognise it.

The purpose of this e-guide is to explain cloud computing in layman's terms. For decision makers who aren't necessarily technology gurus, any mention of the cloud can sometimes set off a "Stranger Danger" alarm. Smaller organisations often resist change because they fear the risks and costs of investing in new technology and they lack knowledge and support.

We've reached a point now where it's obvious the cloud is here to stay and its economic benefits simply make too much sense to ignore. Since most small companies run with exceptionally strict budgets, bearing the financial brunt of owning, maintaining, and securing their technology may be impossible. Understanding the cloud—what it is, its benefits, its risks, and how to manage those risks—is critical.

## A Simple View of the Cloud

Let's try describing the cloud for once without any tech lingo. Picture for a moment a really cramped office space. You and a few co-workers sit in tight quarters with dishevelled desktops buried in mounds of files and paperwork. There is absolutely no room for storage. And it will be years before you'll be able to afford a larger office space.

Your landlord offers to rent you an empty file cabinet in the basement. Although this basement space is shared with other tenants, only you and your team will have a key to this locked file cabinet to store and retrieve documents and files as you wish. Your rent is relatively cheap compared to other tenants since you're only paying for the file cabinet and not the larger storage areas they're renting.

Suddenly, those once cluttered desktops are cleared, leaving some actual physical space to work. Work can be done much more efficiently without the complications that once hindered it. This is close to what the cloud does for the backend of small organisation IT infrastructure.

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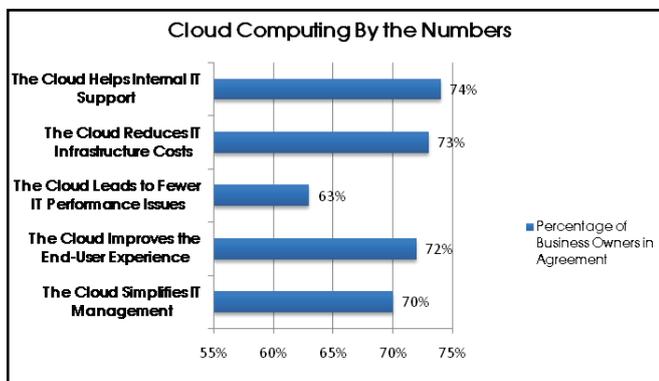
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## The Cloud is a Technology Equaliser

Historically, the technology used by larger companies has never been available to smaller organisations. Most have neither the hardware budget nor internal support to “own” a massive internal network infrastructure.

Previously, only large organisations have had the money to invest in IT infrastructure. But the cloud truly democratises computing and levels the playing field. In many ways, it's the great equaliser, giving companies of any size the ability to store information at a remote datacentre rather than on-premises. It gives small organisations the ability to do large-scale operations at a lower cost.

Cloud Hype Market recently surveyed a number of small-to-medium sized organisations who had already made the switch to the cloud. Here's some data from their findings:



## The Cloud Isn't New, You've Been Using it for Years

The cloud is more or less a sexy buzzword for the Internet.....or at least the next evolution of the Internet. Many organisations don't even realise that they're already in the cloud and have been for more than a decade. Anyone that has ever used a hosted email provider such as

Gmail has already had sensitive data stored, accessed and exchanged in the cloud. Cloud-based email hosting was one of the first and most broadly adopted cloud services used for both personal and professional use.

If you're using social media sites like Facebook, Twitter, LinkedIn, or photo sharing sites like Instagram, you're already part of the public cloud. Do you shop at Amazon or order movies through Netflix? You're again in the cloud.

## It's a Multi-layered Cloud

The cloud has three deployment models:

- ◆ **Private Cloud:** Works best for larger organisations with their own in-house IT support, infrastructure and data centre.
- ◆ **Public Cloud:** Game changer for small and mid-size organisations. Lower cost and more agility. The public cloud is managed off-premises and accessed online.
- ◆ **Hybrid Cloud:** Combines both public and private cloud allowing some data to be kept internally and other to be hosted off-site.

Since smaller organisations don't typically have the resources to build private clouds, most rely on public clouds. Public cloud deployments are completely virtual, which means less hands-on management is required since the infrastructure (hardware such as servers, storage devices, networking equipment, and firewalls) is all off-premises. In an economy where small and medium sized organisations find themselves having to stretch their technology investment as far as it can go, the benefit of not having to pay for hardware, employees to maintain and manage that hardware, software licensing, deployment, and updating is critical.

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# DEMYSTIFYING THE CLOUD IN LAYMAN'S TERMS

One analogy commonly used is the public utility. Obviously nobody would expect you to power your home or business with your very own electrical plant. The costs to do so would be exorbitant and the maintenance would be impossible. Consequently, you and others within the same electrical grid share in the overall cost of the infrastructure to generate and transmit electric power into your home. Being part of the grid enables us all to have access to affordable power based on our usage—just as the cloud makes business solutions that were once only available to large enterprises reasonable for smaller organisations by spreading costs across a network of users and charging only for actual usage.

Companies typically focus on offering one of three categorised cloud-computing services that are referred to as layers in the cloud. These are:

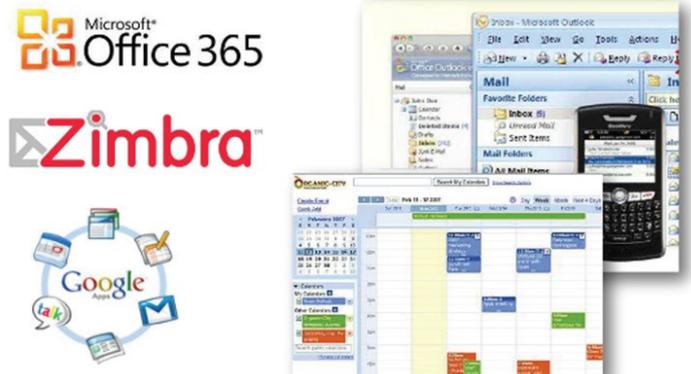
- ◆ **Software as a Service or SaaS:** Remote services accessed online predominately used for office processes such as email, file storage/sharing, communication, bookkeeping—  
Examples: Salesforce CRM, Citrix GoToMeeting, Microsoft Office 365, Dropbox.

- ◆ **Platform as a Service or PaaS:** Web application management, design, storage, security, and app development/hosting—  
Examples: Google App Engine, Amazon Web Services Elastic Beanstalk, Microsoft Azure, Appistry's Cloud IQ, and Engine Yard.

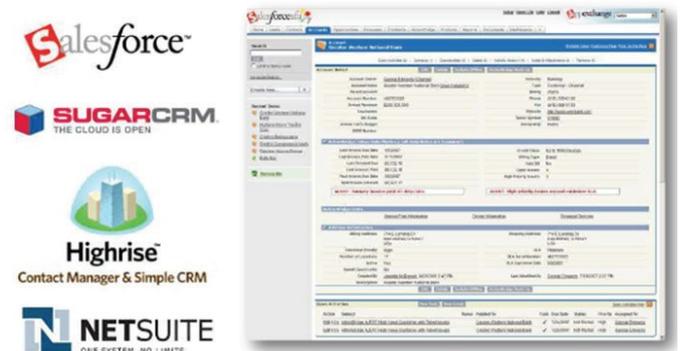
- ◆ **Infrastructure as a Service or IaaS:** Outsources hardware needs by renting smaller organisations their own off-site server, storage, and dedicated network and hardware—  
Examples: Rackspace, Red Hat, VMWare, and Amazon Virtual Private Cloud.

Basically, the cloud hosts an application for any type of work process needed.

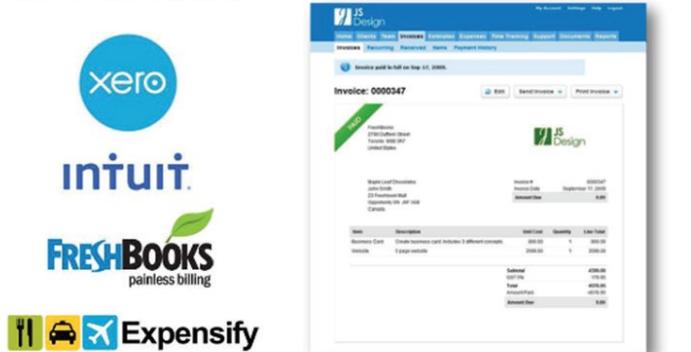
## HOSTED EMAIL / APPS



## CRM / SALES MANAGEMENT



## BILLING / ACCOUNTS / EXPENSES



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## PROJECT COLLABORATION

**huddle**

**Basecamp**  
Project Collaboration

Microsoft Office  
**SharePoint**



### Why Use the Cloud?

- ◆ **Reduction of Costs:** Significant savings can be achieved since the cloud's mass scale computing minimises onsite physical storage hardware and internal IT staffing.
- ◆ **Anytime, Anywhere Access:** Since data access is no longer restricted to a solitary employee or physical device, users can access, share and collaborate in the cloud whenever and from wherever they please. Examples of cloud-based applications include Outlook Web Access, Sage One, Xero, Word Online and Sugar CRM.
- ◆ **Better Collaboration:** The cloud is available on-demand to computers and other devices from any location at any point of time. This allows for better collaborative efforts among teams given today's increasingly dispersed mobile workforce. Today's small and mid-size organisations can share data and collaborate in a way that was once only possible with a highly competent System Administrator and expensive on-premise Microsoft SharePoint infrastructure.
- ◆ **Greater Scalability:** Cloud-based services offer organisations greater flexibility to scale IT needs up or down as the varying work environment demands.
- ◆ **Faster Deployment:** Cloud-based services can be deployed within just a few hours rather than the weeks or months it often takes to strategically plan, buy, build and implement an internal IT infrastructure.
- ◆ **Environmental Friendliness:** The cloud's energy efficiency is attractive to any company conscientious about the environment and wanting to be "green". The Berkeley Lab conducted a six-month study that determined that shifting 86 million office workers to the cloud reduced energy usage by 87%. That's enough left over electricity to power the city of Los Angeles for one year.
- ◆ **Improved Security:** Although many organisations, particularly charities and membership associations, cite security concerns as the reason they're reluctant to move to the cloud, there are actually very few data breaches involving cloud providers. The vast majority of reported data breaches are due to lost, stolen, or discarded devices and paper records, rogue employees, payment fraud, and unintentional employee error. Data in the cloud is likely to be far more secure than data stored on computers, laptops, and company servers with an array of security vulnerabilities. Unlike a laptop, the cloud can't be left behind on a train or hotel lobby. Most smaller organisations cannot secure their data centre with the advanced tools, encryption methods, frequent testing, and third-party certifications used by cloud service providers.
- ◆ **Business Continuity:** Data storage and backup is one of the most frequently used cloud-based services. Many cloud service providers offer unlimited storage capability, automated data sync and backup processes that reduce or eliminate downtime events.

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## The Need for Cloud Monitoring

Organisations who are still uneasy about a move to the cloud may want to consider cloud monitoring through a local managed services provider (MSP). Cloud monitoring helps companies deploy to the cloud with confidence. The idea of relinquishing control to a third-party service provider tends to make many smaller organisations understandably tense. Cloud monitoring offers the worried Chief Executive Officer (CEO) or Chief Information Officer (CIO) around-the-clock end-to-end visibility into the performance of their cloud services and IT infrastructure.

Cloud monitoring supports a hybrid deployment model too by unifying servers deployed in multiple environments—whether it's on-premise, in a data centre, or in a public cloud such as Microsoft Azure or Amazon—into one single dashboard to simplify 24/7 performance monitoring. This allows organisations to oversee the performance of any servers and applications deployed to the cloud to maintain optimal uptime and ensure a positive end-user experience.

Cloud monitoring services offer proactive monitoring, automated alerts, alert escalation, and full problem resolution support by way of a fully dedicated 24/7 network operations centre (NOC). Cloud security is also carefully monitored with frequent audits to proactively identify and address possible breach vulnerabilities.

## SUMMARY

This isn't a dark or ominous cloud hovering over us. It's fluffy, white and full of possibilities. It's a "happy little cloud" as famed oil painter Bob Ross would say. The benefits of reduced costs

and complexity, flexible scalability, and lower per-unit cost are simply too alluring to ignore.

Concerns about security are valid but small organisations today may actually be exposing themselves to more breach vulnerabilities by not being in the cloud. The notion that data must be on-site to truly be secure is as misguided as the belief that money is safer tucked beneath the mattress than in a bank. Top cloud service providers are capable of investing far more into their security than any small-to-medium sized organisation running their own technology.

Cloud monitoring services adequately address any perceived loss of visibility organisations commonly fear by taking to the cloud. It also simplifies the adoption of cloud solutions, setting them on a path to progressively forge ahead with organisational goals and objectives and leverage new technology with confidence.

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