ANSWERS TO 5 QUESTIONS SOUTH AFRICAN SMBS ARE ASKING ABOUT CLOUD

KASKADE.CLOUD
AWS Cloud Experts

IS CLOUD CHEAPER?

Research on the web will reveal many studies and opinions to support or refute the cost savings delivered by cloud. In our experience, however, if you move to the cloud in the right way and manage the cloud resources properly, organisations can expect **10 to 20% savings** on their current IT costs. These numbers increase if you factor in operational savings, the cost of downtime and other related financial measures often lumped into a TCO (Total Cost of Ownership) analysis, but for smaller businesses these are sometimes difficult to determine. For this reason, we always start by looking at the *direct* costs of running your IT in the cloud.

The key to saving here requires you to exploit some specific features of the platform. Note that you do get several additional benefits, but for now we'll assume that the ideal cloud solution would deliver those benefits without a cost increase.

Top Tips

1 *Only Provision What You Need Now.*

2 *Use resources only when you need to.*

3 *Kick the discount tyres.*

4 *Retire technical debt*

ONLY PROVISION WHAT YOU NEED NOW.

Buying hardware requires you to plan for the demands of 3 – 5 years' time, over-provisioning for what your current needs are. Everything in cloud is a click or two from being resized, so only supply the power and capacity you need now.

USE RESOURCES ONLY WHEN YOU NEED TO.

Many cloud services are not charged for when you're not using them so the obvious thing to do is to fire them up only when they're needed (inversely, switch things off when you don't need them). Unless you're working 24/7, chances are you can turn off many resources after-hours.

KICK THE DISCOUNT TYRES.

All cloud vendors offer various discounts for their services. The more knowledge you have of them, the better. We put costs through a number of scenarios to work out a range of discounts before we move anything into the cloud and balance that against the risk of the required commitments.

By applying cost optimisation best practices, we are usually able to save clients at least 20% on their cloud spend

RETIRE TECHNICAL DEBT

Some of your IT costs are spent on services that operate differently in the cloud. Backups are a good example of this: You're probably paying for software licenses, perhaps some media or a storage device, bandwidth and maybe even a service contract to manage it. For many use-cases in the cloud, backups are closely integrated with the services you are using (no 3rd party software required, reduced management cost etc.) and are inexpensive. Plus of course, you only **pay for what you use!**

THE MIGRATION BUBBLE

Be aware of something called the migration bubble. When you initially move to cloud you'll have additional costs – like paying for on-premise and cloud at the same time, paying for a migration partner, potentially increased data usage etc. This needs to be properly managed so that you can reach the TCO phase quickly and move on to business benefit phase.

IS CLOUD MORE RELIABLE?

For small and medium businesses, there is no doubt that your IT systems can be significantly more reliable in the cloud.

UPTIME GUARANTEED

Reliability is now so achievable we even give a guarantee – if the infrastructure powering your systems is causing downtime, we simply don't charge you for the time it was down. Why should you be paying for something you can't use?

Sure, you can get disaster recovery and maybe even always-on systems in other ways, but with cloud those benefits are far **easier** to provision and can be done at price points that are very accessible to SMBs.

Even without disaster recovery and high availability options, cloud systems are built to be highly resilient. With each datacentre housing more than 100,000 servers (and regions having at least 3 datacentres each) it would be unsustainable for the provider to make a success of what is essentially a commodity business without **resiliency**.

AWS even build their own electricity distribution sub-stations to guarantee power quality, and datacentre components are customised to provide the level of performance and reliability needed to operate at scale. AWS provide a **99.99% up-time service level agreement** for compute resources. You can't do this without outstanding operational excellence.

In addition to the platform, many features exist for solutions that are normally unaffordable for SMBs. For example, Amazon's Relational Database Service (RDS) gives you the option to provide **live failover** to another database server in another datacentre without needing to do more than select a checkbox. It's all managed beneath the surface for you. SMBs can take snapshots of their servers and start them up in another region - literally in just a few minutes. Load balancers can be deployed to evenly distribute traffic and a simple availability health-check will ensure your servers are available a healthy (and if not, new ones are started up). Even the ability to rapidly increase the computing power available to a database or app can prevent it from falling over.

"Everything fails, all the time.". AWS enables to you to plan for failure without the expense and management overhead of other platforms, making your IT systems resilient and keeping your business running.

Most of these services are **low-cost** and run on an on-demand basis, meaning you only pay for what you use. There's no investment in equipment and no management of the underlying resources required.

"Everything fails, all the time"

- Werner Vogels
(CTO, Amazon.com)
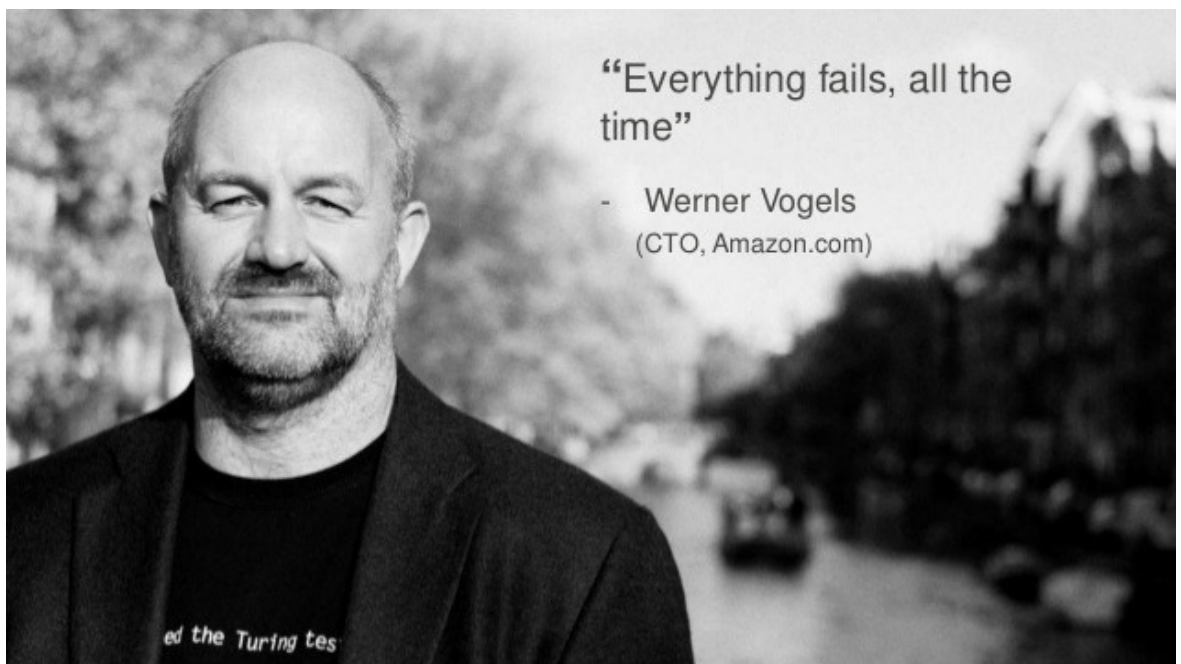
WHAT ABOUT MY MICROSOFT LICENSES?

Few people know that AWS supplies more Microsoft Windows licenses in the IaaS cloud than even Microsoft does on Azure (or all other providers added together). So they have a great deal of experience with Microsoft licensing as well as integrating Windows with their operations e.g. patch management tools, live failover, Powershell etc. Your options look like this:

LICENCE INCLUDED

Windows is one of the standard operating systems supplied with AWS 'servers', meaning you don't have to go and get a separate license. Various versions of SQL are also supplied in this way known as 'license included'.

BRING YOUR OWN LICENSE (BYOL)

If you have your own licensing, you can use that on AWS with two BYOL methods. Either use the license mobility feature of software assurance or, opt for dedicated instances or hosts in AWS if you don't have software assurance.
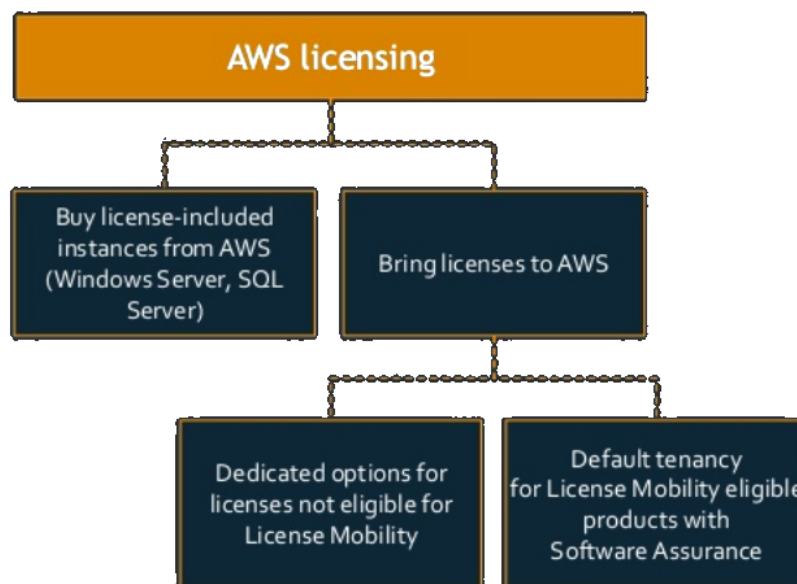
As an SMB, you should be looking for less management overhead (and cost) and in most cases the license included model is best. Bring-your-own-licenses only for infrastructure that will not vary over long periods of time.

SHOULD I MOVE EVERYTHING TO THE CLOUD?

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If you want **reliability**, **lower cost**, **accessibility** and access to transformational technology then there's no point in leaving anything behind, right? According to Forbes, **83% of Enterprise workloads will be in the cloud by 2020**, and in our opinion that figure will be even higher for SMBs as they tend to have less complexity to work around.

Of course, there's no such thing as one-size-fits all in IT, so Amazon published a migration method that incorporates 6 strategies. We find most SMB applications suit the first three (Re-host, Re-platform, Re-purchase). Of the other three, re-architecting should only be considered where the benefit returned is significant as it will take time and money to achieve. Retiring applications can be tougher in SMBs, although we can often consolidate some components. As for making no change – this is almost always limited to applications that have a specific hardware dependency (perhaps the license is tied to it) or that are very latency sensitive. However even in these cases there are often workarounds.

The "6 R's" of Migration

1 Re-host: Just move the application as-is

2 Re-platform: Make a few changes to optimise for cloud

3 Repurchase: Move to another application

4 Re-architect: Change the application itself to make it more cloud native

5 Retire: Maybe you just don't use that application anymore?

6 Retain: Keep the application where it is.

CAN I STORE MY DATA OUTSIDE SOUTH AFRICA?

This is one of the most often cited reasons *not* to move to cloud, and also one of the most misunderstood in that regard. Most of the time companies talk about POPI (or POPIA – the Protection of Personal Information Act) and make the leap straight to data sovereignty which is dealt with in section 72 of the Act and states:

> (1) A responsible party in the Republic may not transfer personal information about a data subject to a third party who is in a foreign country unless any ONE of the following conditions/considerations exist —
>
> (a) the third party who is the recipient of the information is subject to a law, binding corporate rules or binding agreement which provide an adequate level of protection that reflect the principles of PoPI
>
> (b) the data subject consents to the transfer;
>
> (c) the transfer is necessary for the performance of a contract between the data subject and the responsible party;
>
> (d) the transfer is necessary for the conclusion or performance of a contract concluded in the interest of the data subject; or
>
> (e) the transfer is for the benefit of the data subject.

"it acts as an enabler and protector of personal information by providing a set of five conditions (considerations) which a responsible party needs to apply and which seek to protect a data subject's personal information as it moves offshore."

You'll notice that POPI does not *specifically* prohibit having data outside of the country – it states that to do so you must fulfill one of a few conditions. Remember also that this relates to personal information only, not any and all data. As Theo Watson, commercial attorney at Microsoft puts it in an interview with IT-Online, "rather it acts as an enabler and protector of personal information by providing a set of five conditions (considerations) which a responsible party needs to apply and which seek to protect a data subject's personal information as it moves offshore."

Legal firm Michalsons provide some great resources on their website, including a useful summary entitled "Transfers of Personal Information Outside South Africa". In it, they note that for trans-border information flows you should:

- Make a list of the all the countries to which you transfer personal information,
- Work out which of those have a law that provides adequate protection* and,
- For those that don't, decide which other protection in section 72 you are going to rely on.

It's worth noting that in many cases, cloud actually makes compliance with regulatory frameworks easier than if you were to try and achieve these on premise or with some local hosters as the large cloud vendors build, manage and certify their global infrastructure to meet the requirements of those frameworks. With more than 1 million companies using AWS, many of them multinational corporates, government agencies and businesses with stringent regulatory controls, they've had to!

*With the implementation of GDPR regulations in the EU we now also have a set of stringent controls for data residing in member countries and, as Russell Nel notes in an article comparing POPI and GDPR, "Regardless of the progress made on POPIA, compliance with the GDPR will carry a few *additional* requirements"

To help you get some of these points into context, here are links to some great resources:

- *http://www.businessessentials.co.za/2018/05/08/important-questions-answered-about-popi-act-and-gdpr/*
- *https://it-online.co.za/2017/05/02/what-does-popi-really-say-about-data-sovereignty/*
- *https://www.michalsons.com/focus-areas/privacy-and-data-protection/transfers-of-personal-information-outside-south-africa*
- *https://www.michalsons.com/?s=popia*
- *https://iapp.org/news/a/gdpr-matchup-south-africas-protection-of-personal-information-act/*
- *https://aws.amazon.com/compliance/*

We are not positioning any of this as legal advice and you should always seek qualified legal counsel to ensure compliance with legal standards or regulatory frameworks in your specific industry.

WANT TO DIVE DEEPER?

Warren Buffett once said "Never test the depth of a river with both feet".

We have good advice to give you about how cloud will benefit your business and experience we can share, but we also understand that you may want to take Buffett's advice.

That's why we've worked with AWS to build a unique offer to help you dip your toe in the water.

Test one of your servers or applications in AWS at no cost to see if it works for you. No obligation, no risk, no outlay. Then decide if you want to go further with moving to cloud.

 Or, simply get in touch with us on info@kaskade.cloud to discuss your specific needs!

For more info visit
https://kaskade.cloud/business-special/

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